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HENRY V. POOR, Editor.

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American Railroad Journal.

Saturday, May 15, 1852.

Are We Building too many Railroads?

We briefly alluded to this subject in our last; but as our investments in railroads are attracting much attention, and some fears are expressed that we may go beyond the bounds of prudence, we think we cannot do better than to refer to this matter again.

In the first place, are we building railroads beyond the wants of our people? There is no difficulty in answering this in the negative. Some portions of the country are well supplied, and others equally rich and populous, and equally in need of such works, are entirely without them. The State of Georgia has a thousand miles of railroad, and has become rich and populous through their influence. She is looked upon at the South as the model railroad State; as having set the example worthy to be copied by all her neighbors. Her roads have been built by her own means. She has borrowed little or nothing from abroad. Her works have been economically built and well managed, and pay large dividends. No one pretends that Georgia has gone too far with her roads, nor that her people have been impoverished or embarrassed by building them; on the contrary, it is universally admitted that not only those who have built and own the roads, but

the whole community are vastly better off for them. The prosperity of Georgia is a bye word with all her Sister States.

Now the States of North Carolina, Alabama, Mississippi, Louisiana, Tennessee and Kentucky, will all compare favorably with Georgia in population, in wealth, and in natural resources. Railroads are just as much needed by the former as by the latter. They would cost no more per mile.— They would pay equally well, and would accomplish as much in improving the condition of their people. But the aggregate length of line of all these States is not equal to the extent of railroad which we find in Georgia. Here then is a field where at least five thousand miles of railroad are admitted to be needed by the most conservative, for no one can doubt that railroads in the States named will be equally as useful and productive as those of Georgia.

But even Georgia is very poorly supplied with railroad facilities. Not one half of her territory, and hardly one half of her population are within reach of them. A very large proportion of her products are wagoned, or sent down her rivers at great expense, to inconvenient markets. Her area is at least 8 times greater than that of Massachusetts. The latter State has one mile of railroad to every 7 square miles of territory. The same ratio would give to Georgia 9,000 miles of railroad, nearly equal to the whole extent of lines in the United States, and to the States named including Georgia, (embracing an area of 390,000 square miles) more than 55,000 miles of railroad!! Now although there are a few unproductive railroads in Massachusetts, the whole investment has proved to be a good one, yielding a net income of over 6 per cent, and is constantly improving. There can be no doubt, that in the State named, ten thousand miles of railroad are needed to meet the commercial wants of the people, and that this extent of road would find lucrative employment. It is equally true that this extent of line can mainly be built with their domestic means, and not only those, whose money would go into the roads, but the whole community, would be vastly better off for the outlay.

Let us look at the Western States. Take Ohio, for example, here are from 2500 to 3000 miles of rail-road in progress in operation in a state having an area of 40,000 square miles. Yet with all this

extent of line the most captious person can hardly put his finger upon a road that should not be built if the money can be had, that is, that could not pay, if built. The bonds of all the roads, recently constructed in that state, and of those nearly completed; are regarded by our shrewdest and best informed capitalists as the very best securities in the market. Bonds that a year or two since only netted companies from 80 to 85 cents on the dollar, cannot now be purchased at par. This fact is the rule, not the exception. The high estimate placed upon their value is based upon the results that have followed the opening of the roads. With their low cost, and with the rates charged upon Eastern roads, there is not a road in the west that will not pay 10 per cent dividend and leave a handsome surplus besides. As an illustration of their superior productiveness, we will compare the cost and expenses of the Hudson River with those of the Columbus and Cleveland, for the month just ended.

	Cost.	Earnings for April.
Hudson River.....	11,000 000	63,000
Cleveland & Columbus 3,000,000		52,000

Showing a result of some 300 per cent in favor of the western road. In the face of these facts a paper in this city, which is the greatest croaker, and sees nothing but disaster upon our investment in railroads, finds nothing to censure, but every thing to commend, in the Hudson River railroad project.

There is certainly no capitalist any the worse off for having invested in any of the recently constructed railroads in Ohio, for we presume that there is no one, who could not sell out his investments at a large advance. The bonds which he bought at 85 are now quick at par. Capitalists have not suffered in consequence of the Ohio roads. That the people of the state are vastly better off, does not require argument to prove. The farmer realizes from a quarter to a third more for his produce. He effects an equal saving upon all the heavy staples that he is compelled to import. Every kind of property has risen in value, and there can be no doubt that every railroad in the state has increased the market value of the property of the district through which it runs, to twice the amount of the cost of the road.

Such are the practical results that have been already achieved by the roads in progress. But there are by no means the strongest lines in that State. We doubt whether the 800 miles already in progress in Ohio possess business capacities greater

than the average of the whole 2,000 miles which are now in progress. Precisely the same reason exists for completing all these lines that did for the construction of the first mile in the State.

If what we have said of the roads of Ohio are correct, the same view will apply with equal force to the roads of Indiana, Illinois, and in fact of all the western States. If 3,000 miles of railroad can safely be built in Ohio, then 2,500 can in Indiana, and 4,500 in Illinois, and a like proportion in other States. The States of Ohio, Indiana, Michigan, Illinois, Iowa, Wisconsin and Missouri, embrace an area of more than 400,000 square miles. The same relative number of miles that we find in Massachusetts, would give for the above over 57,000 miles of railroad.

We do not pretend that at present, such an extent of railroad would find profitable employment in the States named. We give the statistics for the purpose of calling attention to the vast extent of the field in which railroad operations are carried on. We do say, however, that the west is much better adapted to railroads than Massachusetts, that a much greater necessity exists for their construction, and that an equal area of western territory will yield a much larger amount of business.—Railroads are exactly adapted to the wants of a country like the west, which is one vast plain of inexhaustible fertility of soil, and capable of unlimited productiveness, but without domestic markets. For these reasons, there can be no doubt that the construction of railroads will be carried on in all the States named, till the extent of line compared with their area will equal that in Massachusetts. A long series of years will of course be necessary to such a result. At present, however, there can be no doubt that in the States of Ohio, Indiana and Illinois, at least 10,000 miles of railroad would at once find remunerative employment. Not more than one half of this extent of line is yet even projected. As far then as the *business* wants of the country are concerned, we are not overdoing the work of railroad construction. Three times our present extent of line, or 30,000 miles, would find profitable employment *to-day*, if built, and precisely the same necessity exists for their construction that did for the first mile. These facts most satisfactorily account for the immense number of lines in progress, and indicate in some degree the extent to which railroads will be carried. The contemplated routes are through districts equally as rich, fertile and well settled, as those now in operation. The only difference between the two, is that one line has been fortunate in raising means for its construction, while the other has not. If we must stop building railroads, it must be from *necessity* and not from *principle*.

The question resolves itself, then, into this: not whether our investments are good; not whether we are building lines that will not pay: but whether we are investing beyond our means. Now we contend that we are not investing beyond our yearly accumulations; and that if this be so, we are not over-investing, having demonstrated, we think, that railroads are legitimate projects, and are certain to yield a good income.

The annual nett earnings of the country cannot be less than \$100,000,000, (they are probably a great deal more,) all of which is seeking investment. But we find the business of all the great industrial interests, excepting railroad construction, overdone. There has been never a period in the history of this country when there was found so

large a surplus of every variety of products. Most of the great agricultural products, have been, and still are, a drug in the market. So with the products of our manufacturing establishments. We witness the singular coincidence of great abundance of money, and remarkably low prices. This state of things proves that there are no symptoms of a commercial revulsion, so much apprehended.—These apprehensions, we believe, are founded upon past experience, and not upon any existing causes at work. The present condition of things presents a striking contrast to the years of 1835-6, which proved so disastrous to the credit and prosperity of the whole country. So great was the mania that then seized our people, so occupied were they in every kind of speculation, that almost every useful employment was abandoned, and in 1836 and '7 we found ourselves importing our potatoes from Ireland, and our wheat from the Baltic and Black seas. The country was then in fact reduced to poverty. The enormous debts we contracted abroad drew from us all our currency; while at the same time, from the scarcity of all kinds of provisions, we were compelled to pay an enormous price for all the necessities of life. How striking a contrast does the present condition of things present. Instead of a scarcity, we have, in fact, too great an abundance. Hardly any kind of labor is remunerative, from the extreme low price of every kind of produce and merchandize. We are not therefore in a condition to fear changes, for almost any change must be for the better.

If we have a surplus of capital it is not wanted in the ordinary pursuits of business. In what then can it be so well used as in the construction of railroads? In no way can it be so profitably employed, as far as its *income* is concerned, or in its influence in the appreciation of the value of all kinds of property. Experience shows that our money is not needed in commerce, nor in manufacture, nor in agriculture. If we have a surplus why not put it into railroads?

Again: investments have but little tendency to create a stringency in the money market, so long as they yield a fair return. An *undoubted* 6 per ct. security will command par in any state of the money market. A man who has \$100,000, and invests in such a security is never embarrassed by the operation, because he can convert it into money at any moment. Such a security, to a certain extent, takes the place of money, paper money we mean, which of itself is only a *credit*, and which passes for money by virtue of the *credit* attached to it. United States stock will perform the same office; so will any *undoubted* security. The great danger from investments is, that they will be unproductive. So long as they shall continue to pay well, neither individuals nor the community are the worse off for having made them. The railroads that we are building are safe investments, and so long as they shall continue to be such, there can be no danger of over investing in them. That they are and will continue to be needed, and will pay a handsome return upon their cost for many years to come, we think we have fully shown.

The money required for our roads is very slight when the extent of these lines are taken into consideration. As stated in our last, the average amount borrowed by our road in progress will not much exceed \$7,000 per mile. To be on the safe side we will put it at 10,000 per mile. We showed that the balance required, was furnished by the *labor*, and not the accumulated capital of the coun-

try. Allowing that we are building 3,000 miles of railroad per year, this would require 30,000,000 to be annually drawn from our accumulated earnings, for our railroad enterprises. These enterprises are divided among 30 States and are spread over an area of more than 1,000,000 of square miles of territory. We believe the above amount can be spared from the yearly earnings of the country without being felt. It should be borne in mind that our roads in progress yield annually a net income of at least \$20,000,000, almost the whole of which is reinvested, and that the saving effected by them, over the old mode of transportation must amount to a much greater sum. We therefore can foresee no lack of capital with which to carry forward our railroad, nor do we see how an equal amount could be so well employed.

We are building a vast number of railroads but at a very low cost. The most timid among us have expressed no distrust in reference to those projects from which real danger is to be apprehended. These are eastern roads involving an immense cost, upon very doubtful results. The Hudson River road will cost some \$12,000,000, enough to construct 1,000 miles of road in some other portions of the country. It is from roads like these, projected and constructed by our great conservative capitalists, who have no faith in western projects, and who see certain ruin involved in the construction of a few hundred miles of railroad in the west. The result will prove the depth of their sagacity.

Ericsson's Caloric Engine.

Below we give a notice furnished to the Boston Transcript, of an engine constructed by Mr. Ericsson of this city, the motive power of which is heated air. Though somewhat incredulous as to the result, it would, in this age of discovery, savor more of presumption to deny what is claimed for the above invention, than to affirm its impracticability. Nothing is *impossible*, in science, which we can comprehend. Realization is simply a question of time.

The idea of substituting a new and superior motive power for steam will no doubt strike many minds as extravagant if not chimerical. We have been so accustomed to regard steam power as the *ne plus ultra* of attainment in subjecting the modified forces of nature to the service of man, that a discovery which promises to supersede this agency, will have to contend with the most formidable preconceptions as well as with gigantic interests.—Nevertheless, it may now be predicted with confidence that we are on the eve of another great revolution; produced by the application of an agent more economical and incalculably safer than steam. A few years hence, we shall hear of the "wonders of caloric" instead of the "wonders of steam." To the question, "how did you cross the Atlantic?" the reply will be,—"*By caloric*, of course!"

On Saturday I visited the engine manufactory of Messrs. Hogg & Delameter of this city, and had the privilege of inspecting Ericsson's caloric engine of sixty horse power, while it was in operation.—It consists of two pair of cylinders, the working pistons of which are 72 inches in diameter. Its great peculiarities consist in its very large cylinders and pistons, working with very low pressure; and in the absence of boilers or heaters—there being no other fires employed than those in small grates under the bottoms of the working cylinders.

During the eight months that this test-engine has been in operation not a cent has been expended for repairs or accidents. It is a beautiful and imposing object, and conveys the idea of power, and symmetry, much more impressively than the largest steam engine that I have ever seen.

The leading principle of the caloric engine consists in producing motive power by the employment of the expansive force of atmospheric air instead of

that of steam; the force being produced by compression of the air in one part of the machine and by its dilatation by the application of heat in another part. This dilatation, however, is not effected by a continuous application of combustibles, but by a peculiar process of transfer, by which the caloric is made to operate over and over again, viz: the heat of the air escaping from the working cylinder at each successive stroke of the engine is transferred to the cold compressed air entering the same, so that in fact a continued application of fuel is only necessary in order to make good the losses of heat occasioned by the unavoidable radiation of the heated parts of the machine.

The obvious advantages of this great improvement are the great saving of fuel and of labor in the management of the engine, and its perfect safety. A ship carrying the amount of coal that the Atlantic steamers now take for a single trip could cross and re-cross the Atlantic twice without taking in coal; and the voyage to China, or to California could be easily accomplished by a caloric ship without the necessity of stopping at any port to take in fuel. Anthracite coal being far the best fuel for this new engine, we shall no longer have to purchase bituminous coal in England for return trips. On the contrary England will find it advantageous to come to us for our anthracite. A slow radiating fire without flame is what is required, and this is best supplied by our anthracite. There being no smoke, a short pipe to carry off the carbonic oxide gas and other products of combustion is all that is needed.

But the great advantage of this important improvement, and that which, in the absence of other advantages, would commend it to adoption, is the entire safety of the engine; an explosion being impossible. In steam engines, if the water gets low, or if there is an excess of pressure, or any defect in the materials of which the boiler is composed, or an over heating of the furnace tops occasioned by incrustation formed by salt, in marine boilers, &c., an explosion is inevitable. But in the caloric engine, the result from neglect will be—the stoppage of the engine. The present test-engine shows that there must be neglect to put in fuel for the space of three hours before the speed is even slackened. Thus you have nothing to fear from a sleepy engineer or an ambitious captain; and all the while not one quarter the amount of attendance and labor required to keep a steam engine in motion will be needed. When we consider the amount of human mutilation, suffering and loss, which will be prevented for a century to come, when this invention shall have passed into general use—surely every philanthropist will bid God speed to this new motive engine.

A caloric ship of 2200 tons, to be called THE ERICSSON, is now in process of construction by Messrs. Perrine, Patterson & Stack, and is in such a state of forwardness, that she will be in frames by the end of next week. She is a very beautiful model, and is the admiration of all shipbuilders for her remarkable strength—being admitted to have the strongest bottom of any ship built in New York. The machinery is more than half completed; and through the kindness of Messrs. Hogg & Delamater, I had an opportunity on Saturday, of inspecting it. I saw three, out of the four working cylinders, the paddle-wheels, all the valves and valve chests, the main links and connecting rods, the bed plates, and main pillar blocks—and various other parts of the engines—all of them massive forms of metal, cast with the utmost precision and smoothness, and the castings pronounced by competent judges to be superior to the best in the British steamers. The cylinders are 168 inches in diameter—72 inches larger than those in the Collins steamers. The fact of succeeding at the first trial in casting such stupendous cylinders in so perfect a manner is certainly highly creditable to the manufacturers, Messrs. Hogg & Delamater, and is a feat, which will be appreciated by all, who are aware of the difficulties to be overcome in casting cylinders of such unexampled magnitude.

The Ericsson will be ready for sea by October next; and her owners intend to take passengers at a reduced price in consequence of the reduced expenses under the new principle. The ship belongs to Mr. John B. Kitching and a few other wealthy men—Mr. Kitching being the energetic leader of

the whole enterprise. The Ericsson will be commanded by Captain Lowber.

From the Journal of Commerce.

On Railway Curves, Axles and Wheels.

If a cylindrical body be placed upon a plane, it can roll upon it in no other than straight lines; or, if it be a conical body, in no other than circular ones. In either case if the plane is inclined beyond the angle of repose, there will be a sliding tendency also, arising from gravitation; but the further consideration of this point has no practical bearing on the subject, inasmuch as the limits are never approached on a railway curve.

In England, but few railway curves are of less radius than half a mile, which is judicious, and the coning of the wheels, one-sixteenth of an inch to a play of one inch, is conformable thereto; but, to increase the diameters of the driving wheels, without at the same time increasing the radius of the curves, is a questionable policy as far as safety is considered; and the coupling of the wheels is decidedly wrong in principle.

All curves being considered as portions of an imaginary cone, whose apex is just level with the axis of the largest wheels, it necessarily follows that that wheel regulates the elevation of the inner, and depression of the outer rail, as well as the coning of the wheels, within the limits allowed for play, which, as before stated, is usually one inch. Consequently, with large wheels the coning should be increased, and that causes an outward pressure upon the rails, tending to separate or spread them, which is of course an evil. A wheel whose diameter is 66 inches, is not calculated to go round a curve of less than half a mile radius, but one of 48 inches in diameter will go equally well round one of somewhat more than one third of a mile radius. An English train, therefore, could never get round our railway corners, and with their large coupled wheels, it is rather in defiance of mathematical principles that they succeed so well in getting round their own. Our American trucks would run on the English railways at a very high speed, with great safety; the truck system is indeed an admirable one, and with little alteration may be made perfect.

If two wheels are required to run upon a railway curve, under similar circumstances to those herein before stated, the one of 66 and the other of 48 inches diameter, coned one-sixteenth of an inch, to a play of one inch, the inner rail should be raised and the outer one be depressed one-sixteenth of an inch, making a difference of one-eighth of an inch in the level of the cross section of the two rails: we shall then have the axles of each wheel level, if the inner wheel is running upon a part of its diameter, which is one-eighth of an inch less than that part of the opposite wheel which is running upon the outer rail. Reducing these diameters therefore to eighths of an inch, we have the proportions of 528 to 527 in the one case, and 384 to 383 in the other; and these proportions, in units of the distance from centre to centre of the rails, give also the distance to the apex of the cones which the wheels are respectively calculated to travel round, or in other words, the radius of the curves; which, in the case of the large wheel, is 2464 feet, and in the lesser one 1792 feet, from the centres of the outer rails. These wheels will run together equally well, notwithstanding their difference in diameter, provided the curve be of not less than the greater radius; the axle of each will keep its horizontal position; and this is indispensable, to avoid the rocking motion which any change from this position always produces, precedes, and is the fruitful cause of trains running off the rails on the curves.

But the axles cannot be preserved in a horizontal position by this means alone: it is also necessary that each axle be normal to the curve it is travelling upon at each and every point, and this requirement discloses another defect in arrangement (before alluded to) of coupling the wheels, and thereby preventing the axles from assuming their natural position.

When two pairs of wheels, such as we have taken for example, one running as nearly together as possible, (to avoid rubbing each other, when going round a curve,) the lateral play necessary to be allowed to each wheel, is somewhat more than one sixteenth of an inch, and thus their axles will

come nearer together, by a little more than one eighth of an inch over the inner rail, than they will do over the outer one; and each axle will point in the direction of the axis of the cone around which it is supposed to be travelling, which in the present case is of 2464 feet radius at the base; and the large wheels only point to its apex; but the lesser ones do not point so high. This, however, is no disadvantage, unless the two are very near to each other, in which case the axle must have play endways in the boxes, which indeed they have generally quite enough of before they have been long in use, as the wear on the flanges and cutting away of the inner portion of the rails sufficiently testify; for these things must happen together. The practice of running large and small wheels together is nevertheless a bad one, and should be avoided.

It may appear to be a small matter to cavil about the difference in the level of the cross section of a railway, and to prove that the inner rail should be higher than the outer one, an eighth of an inch; when it is well known, that it is no uncommon occurrence for rails to be half an inch to an inch or more out of truth, even on the best railways. But when we are professedly laying the rails higher on the one side than on the other, it is assuredly an acknowledgment, at least in theory, that such a matter is worthy of attention, and therefore it cannot be unimportant to know which rail it is proper to elevate, or which to depress; for it is evident that, if the usual practice be erroneous in this respect, the amount of the error is at least doubled.

The evils which I have endeavored to point out, as more particularly affecting the safety of travel upon railways, may be summed up as follows:

Firstly, Elevating the outer rail instead of the inner one, upon the curved portions of the railways.

Secondly, Large driving wheels, which require much coning, to go round the curves, and therefore exert an injurious lateral pressure upon the rails.

Thirdly, Coupling the wheels, whereby the flanges are liable to abrade the rails, as each axle is prevented from assuming its natural position of normal to the curve.

Fourthly, Two engines, tugging first on one side and then on the other, like a man sculling instead of rowing in a boat, whereby the rocking motion is greatly increased; and if it operates simultaneously with that produced by the cross winding of the axles, is almost certain at least to throw the locomotive off the rails.

All these causes tend materially to produce those accidents which usually take place upon the curves; but the greatest evil is the want of proper attention to the maintenance of the permanent way more particularly upon the curves, and were these properly attended to, comparatively very few accidents would happen upon them, more than on the straight parts of the line; but that affords no just reason for neglecting the other evils complained of. But still, the great desideratum is the perfection of the permanent way.

Talk of a director walking over a railway to examine it? why, he may as well send a carrier pigeon over it. Take a level, Mr. Director, and try round the curves, and examine the charts and then "mend your ways," "mend your ways," for they are sure to require it; it is a simple mathematical proposition, but worked out with a pickaxe, in the open air, away from the quiet, snug and comfortable office of the directory, and the Engineer. The word of an ignoramus is generally taken—that is "all right," but let any man who has common sense take a level, and put it across the rails, and he will no longer be in doubt as to the cause of many of the accidents which occur.

The foregoing remarks were in substance written in August 1847, and arose from a careful examination of the facts of the case, before a Jury, at Kings Norton, near Birmingham, in England, to determine the cause of an accident by which the Engineer lost his life, on the Midland railway near that place. Subsequent observations have but confirmed the impression then produced; and I shall indeed be amply repaid, if one life may be saved in consequence of the attention of any one being turned to the subject. I hope S. A. P. will find a complete answer to his inquiries.

I remain most respectfully, T. A. R.

Terre Haute and Alton Railroad.

Address of the President to the Stockholders and Directors.

GENTLEMEN:

It has been the pleasure of the directory, elected by the stockholders at their recent meeting in Shelbyville, to confer upon me the appointment of President of "The Terre Haute and Alton railroad company." For this proof of your confidence, I beg leave to tender to you my sincere and heartfelt acknowledgments. I accept the trust thus confided to me, with unaffected diffidence, and with unfeigned distrust of my ability to meet your just expectations. But I derive no little encouragement from the fact, that I am to be sustained by a board so able, so willing, and so ready to lend me, at all times, their efficient aid and co-operation. Under such auspices I enter upon the work assigned to me, and pledge myself to devote all my energies to the speediest practicable consummation of the great enterprise in which we are engaged, and which is to connect the Mississippi with the Atlantic, by continuous railroads—and in carrying on its operations, I take pleasure in giving the assurance that I shall scrupulously adhere to the letter and spirit of the resolutions adopted at the meeting of stockholders, and subsequently sanctioned and ratified by the board of directors. It shall be my constant aim to guard, with jealous caution, the funds of the people and counties; and to prevent, in every way possible, the improvident expenditure of money. Nor will it be less my aim to regard, with an equal eye, and to do equal justice to all parts of the line—to the centre as well as to the extremities.

And now, gentlemen, have we not the greatest possible stimulus to untiring perseverance, in view of the present condition and prospects of our road? We have cleared away every impediment, by a strict compliance with all the provisions of the general law. The Legislature has granted to our company a special charter, liberal in its provisions. The Legislature of Indiana has also granted our company a charter, to extend its road to the Wabash river and the city of Terre Haute.

Under our charters, we have raised by city, county, and individual subscriptions, more than half a million of dollars. Books are now open in every county along the line of the road for further subscription to the stock; and I have every assurance that large additions will be made to the list; and I earnestly hope that the directors will not cease their exertions to arouse the people, through the entire line of road, to a lively interest in the work, and swell the subscriptions to the largest possible amount—for it is far better that the greatest portion of the stock should be owned at home. So soon as a sufficient amount is taken, I think I have reliable assurances from Eastern capitalists, that all the stock will be taken, and a contract entered into for the construction of the whole road, and the work commenced at an early day. Therefore, much depends upon instant, simultaneous and energetic action on your part.

Such, then, is the position of the Terre Haute and Alton railroad company. Will you, can you falter, under such encouraging circumstances? Look to the character of your road—consider its termini—the exceeding beauty and fertility of the country over which it passes—its connection at Indianapolis with the whole North, East and South—the facilities that will be afforded to the interior for ready access to the best of markets—with the vastly increased amount of agricultural products—the impulse that will be given to every branch of industry—the greatly enhanced value of your lands; etc., etc.

It is to be deeply regretted by all interested in this great work, that my worthy predecessor, the Hon. Cyrus Edwards, was compelled, from ill health, to resign his seat. Could he have been retained, it would have been much better. His untiring zeal for the work has not in the least abated, though retired from his office as President of the company.

And now I hope, by an untiring and energetic prosecution of the work, to merit your confidence and cordial support. Very respectfully,

Your obedient servant,

SIMEON RYDER,

President Terre Haute and Alton R. R. Co.
Alton, April 20, 1852.

Abstract of Massachusetts Railroad Reports.

	Capital.	Capital paid in.	Cost.	Length.	Do. double track.	Do. branches.	Speed of trains per hour.	Earnings.	Expense of working.	Net earnings.	Dividends.	Debt.	Surplus.
Berkshire	\$500,000	\$500,000	\$600,000	21-20	25-77	1-87	25	\$43,000	\$285,029	\$42,000	\$42,000	\$141,080	\$156,712
Boston and Lowell	1,830,000	1,830,000	1,945,646	25-77	25-77	8-79	12	409,152	305,068	141,123	146,400	150,000	85,032
Boston and Maine	4,155,700	4,064,299	4,090,452	74-26	27-79	6-79	11	633,095	177,776	338,026	290,899	287,000	84,329
Boston and Providence	3,160,000	3,160,000	2,840,442	41-00	15-75	12-00	14	377,306	414,109	199,630	94,800	560,657	84,329
Boston and Worcester	4,500,000	4,500,000	4,862,748	44-63	44-63	24-00	11	743,932	30,998	329,813	315,000	190,505	84,329
Cape Cod Branch	300,000	421,950	633,676	27-08	1-45	1-45	21	56,736	30,998	25,738	25,738	190,505	84,329
Charles River Branch	117,300	52,946	68,872	11-06	1-45	1-45	14	56,736	30,998	25,738	25,738	190,505	84,329
Cheshire	2,250,000	1,511,154	2,777,843	53-64	1-45	1-45	10	222,295	159,322	62,973	24,600	113,520	112,188
Connecticut River	1,750,000	1,591,110	2,777,843	50-00	1-45	1-45	10	199,894	115,147	84,746	24,600	113,520	112,188
Dorchester and Milton Br.	130,000	73,340	136,372	3-25	2-35	2-35	25	7,530	84,746	84,746	24,600	113,520	112,188
Eastern	3,150,000	2,850,000	3,120,391	77	16-00	19-87	21	502,054	224,599	277,455	267,400	797,180	74,292
Essex	700,000	295,177	312,135	19-86	2-00	1-36	15	39,960	32,439	7,521	7,521	345,371	29,590
Fall River	1,900,000	1,050,000	1,050,000	42-24	1-36	1-36	13	232,332	132,527	99,794	78,750	2,748	29,590
Fitchburg	3,540,000	3,540,000	3,612,486	50-93	50-93	16-85	22	516,012	310,376	205,635	140,000	116,508	141,955
Fitchburg and Worcester	500,000	205,674	305,409	13-99	1-36	1-36	22	29,354	19,815	9,539	9,539	92,653	9,539
Grand Junction	1,200,000	781,607	919,396	6-49	1-36	1-36	20	802	6,830	6,830	6,830	398,477	398,477
Harvard Branch	40,000	20,580	23,701	3-10	1-36	1-36	20	5,853	6,830	6,830	6,830	1,200	1,200
Lexington and W. Cam.	200,000	121,000	240,367	12-35	1-36	1-36	25	36,311	28,152	8,159	8,159	127,354	127,354
Lowell and Lawrence	600,000	600,000	651,214	14-58	14-40	0-95	28	117,017	55,445	61,573	54,000	149,675	17,034
Nashua and Lowell	400,000	400,000	510,263	20-13	1-36	1-36	16	173,449	130,144	53,305	32,000	77,974	11,821
New Bedford and Taunton.	300,000	118,110	145,811	14-58	1-36	1-36	20	7,111	110,197	22,226	22,226	77,974	11,821
Newburyport	1,700,000	493,233	1,450,410	65-70	0-19	0-19	12	101,657	110,197	22,226	22,226	77,974	11,821
N. Lond., W. L. and Palm.	1,200,000	453,015	1,213,431	28-97	0-19	0-19	12	60,085	37,859	22,226	22,226	77,974	11,821
Norfolk County	2,825,000	1,914,050	2,583,104	59-00	1-08	7-00	25	270,049	138,450	131,598	71,692	875,116	57,890
Norwich and Worcester	2,100,000	1,964,010	2,293,534	37-25	11-50	7-75	20	318,075	240,924	77,151	77,151	328,800	50,536
Old Colony	275,000	209,760	264,115	14-08	0-70	0-70	20	37,514	16,012	21,502	27,000	50,637	15,522
Peterboro and Shirley	500,000	450,000	443,677	18-65	0-70	0-70	20	37,514	16,012	21,502	27,000	50,637	15,522
Pittsfield and N. Adams	1,457,500	1,457,500	1,820,064	43-41	5-17	5-17	30	202,889	81,968	115,921	115,921	306,000	115,921
Providence and Worcester	400,000	243,305	343,220	16-88	0-22	0-22	30	36,640	32,106	4,533	4,533	87,605	6,903
Salem and Lowell	300,000	299,532	293,759	8-15	0-22	0-22	30	42,235	29,822	12,413	12,413	10,000	10,000
South Reading Branch	600,000	235,685	427,689	21-93	1-05	1-05	11	13,318	31,409	31,409	31,409	7,500	7,500
South Shore	448,700	448,700	448,700	13-16	1-05	1-05	11	13,318	31,409	31,409	31,409	7,500	7,500
Stockbridge and Pittsfield	275,000	265,900	265,762	13-16	1-05	1-05	11	13,318	31,409	31,409	31,409	7,500	7,500
Stony Brook	90,000	250,000	307,136	11-10	0-57	0-57	22	13,292	104,291	5,966	5,966	27,001	27,001
Taunton Branch	230,000	230,000	307,136	11-10	0-57	0-57	22	13,292	104,291	5,966	5,966	27,001	27,001
Troy and Greenfield	354,900	56,592	3,450,004	42-55	8-00	8-00	20	180,617	100,140	80,476	80,476	412,070	412,070
Vermont and Mass.	3,300,000	2,250,353	9,953,758	69-00	53-14	53-14	15	1,353,894	597,756	756,138	756,138	1,683	1,683
Western	6,500,000	5,150,000	9,953,758	155-40	2-75	2-75	23	1,762	21	1,741	1,741	56,330	56,330
W. Stockbridge	39,000	39,000	41,516	2-75	2-75	2-75	23	153,791	98,511	55,280	55,280	293,245	293,245
Worcester and Nashua	1,800,000	1,039,891	1,309,564	45-69	1-36	1-36	23	153,791	98,511	55,280	55,280	293,245	293,245
Total	55,338,700	45,260,478	18,581,433	1,207-50	268-85	113-03	23-99	7,330,961	4,013,695	3,320,386	2,159,436	15,063,819	2,341,478

* Run by Housatonic R.R. † Do. O. C. R.R. ‡ Do. Fitchburg R. R. § Do. Nashua and L. R.R.

The Pennsylvania Coal Trade.

It is now thirty-one years since the anthracite coal of Pennsylvania became an article of commerce. The Lehigh Coal Company, the oldest by several years, of those gigantic corporations now engaged in the traffic, brought to market, in 1820, the amount of 365 tons. This marks the beginning of the anthracite coal trade. The Schuylkill Navigation Company commenced operations in 1825, in which year it brought to market 6,500 tons, the business of the Lehigh Company having, by that time, grown to 28,393 tons. In 1829, the coal from the Lackawanna region began to find an outlet from Carbondale, through the works of the Delaware and Hudson Canal Company, and in that year 7,000 tons of it were taken to market, the business of the Lehigh Company having then grown to over 30,000 tons, and that of the Schuylkill Navigation to nearly 80,000. The next material step was the opening of the Reading Rail Road, which commenced operations in 1841, by bringing to market 850 tons, the business of the Lehigh Company having then grown to 143,037 tons, that of the Schuylkill Navigation to 584,692 tons, and that of the Lackawanna region to 192,270 tons.

During this period, from 1820 to 1841, various smaller channels of trade were opened. But the four events, which have been named, mark the general outline of the history of the anthracite coal trade during the first twenty-one years. This period witnessed the formation of the four great companies—the Lehigh, the Schuylkill Navigation, and the Reading Rail Road, all connected with Philadelphia, and the Delaware and Hudson canal company, engaged in the Lackawanna trade, and centred in New York. Under the influence of these companies anthracite coal was brought into familiar use along the whole Atlantic border, and the trade had grown from 365 tons to what then seemed the enormous amount of 942,312 tons.

During the last ten years, these companies have all been pushing their operations, increasing continually their investments, and their means of production. The investment of the Delaware and Hudson company [including its auxiliary and dependent, the Pennsylvania coal company] has gradually swelled to the enormous sum of \$10,800,000; that of the Lehigh company to \$7,900,000; that of the Schuylkill Navigation to \$10,000,000; and that of the Reading railroad to \$16,900,000. In addition to this, there is a State canal of sixty miles, from Easton to Bristol, occupied almost exclusively with the coal trade, besides a large number of small lateral roads in the mining regions, and an immense number of private operators engaged in the several coal fields, either in mining or transporting. Altogether, probably not less than \$70,000,000 have been invested in the production and transportation of coal, and yet, thus far, those engaged in the business have been barely able to keep pace with the demand. There have been, indeed, occasional fluctuations in the market, consequent upon winters unusually mild, or unusually cold, upon disastrous floods, or some other special contingency. Yet taking into view any whole series of years, the trade has been found steadily increasing, and with a ratio so remarkable as to entitle it to a careful examination. It foreshadows a source of wealth to Pennsylvania far more reliable, as well as more wholesome in its influences, and ultimately far richer in material results, than the gold mines of California.

To make the matter more intelligible to those not practically conversant with the subject, perhaps it will be best to give first a separate view of each of the great channels of trade, and afterwards to show the general movements of the whole in one combined view.

There are three principle coal regions, on which the great Atlantic cities, and particularly New York and Philadelphia, are now mainly dependent for fuel. These are the Lehigh, the Schuylkill, and the Lackawanna regions. To each of these a brief notice will be given.

The coal of the Lehigh region is brought by the Lehigh canal from Mauch Chunk, Penn Haven, and some other points, an average distance of fifty two miles to Easton. Thence a small portion of it proceeds by the Morris canal to Jersey city. The great bulk, however, comes down the Pennsylvania state canal, sixty miles, to Bristol, thence down

the Delaware, twenty miles, to Philadelphia, or through the Delaware and Raritan canal, forty two miles, to New Brunswick, and thence by the Raritan river to New York. About one-half of the coal of this region is mined by the Lehigh company, who own a large body of coal lands; the rest is mined by various individuals and corporations. But all of it comes through the canal of the company, and is dependent upon that and the other canals that have been named, for the means of reaching a market. The gradual growth of the coal trade of this region, is exhibited to the eye in the following table, showing the number of tons brought to market each year, from 1820 to 1851:

	Tons.		Tons.
1820	365	1836	148,211
1821	1,073	1837	223,902
1822	2,240	1838	213,615
1823	5,823	1839	221,025
1824	9,541	1840	225,318
1825	28,393	1841	143,037
1826	31,280	1842	272,546
1827	32,074	1843	267,793
1828	30,232	1844	377,002
1829	25,110	1845	429,453
1830	41,750	1846	523,002
1831	40,966	1847	643,973
1832	70,000	1848	650,746
1833	123,000	1849	801,246
1834	106,244	1850	732,622
1835	131,250	1851	989,269

The coal of the Schuylkill region has two means of reaching a market, entirely independent of each other. The first of these is the Schuylkill canal. By this route the coal is brought from the mines in Schuylkill county to the terminus of that work at Fairmount, Philadelphia, a distance of one hundred and eight miles. That portion of it intended for the New York market, is towed in the same boats round to Bordentown; thence through the Delaware and Raritan canal, forty-two miles, to New Brunswick; thence by the Raritan river to New York. The coal that comes to market by this channel is mined chiefly by private operators, but all of it must come through the canal of the Schuylkill Navigation company, and hence is dependent upon them. The movement of the trade, so far as this route is concerned, is exhibited in the following table, showing the number of tons brought to market every year, from the commencement, in 1825, to 1851:

	Tons.		Tons.
1825	6,500	1839	442,608
1826	16,767	1840	452,291
1827	31,360	1841	584,692
1828	47,284	1842	491,602
1829	79,973	1843	447,058
1830	89,984	1844	398,887
1831	81,854	1845	263,587
1832	209,271	1846	3,440
1833	252,971	1847	222,693
1834	226,692	1848	436,602
1835	339,508	1849	489,208
1836	432,045	1850	288,030
1837	523,152	1851	579,156
1838	433,875		

The second, and now by far the greatest, outlet for the coal of the Schuylkill region, is the Reading railroad, reaching, by a continuous double track, ninety-three miles from the mines in Schuylkill county, either to the centre of Philadelphia, or to tide-water at Richmond, just above Philadelphia. The coal intended for New York is shipped at Richmond, and goes chiefly through the Delaware and Raritan canal, in the manner before described. That intended for Boston and the New England market, now including more than one-half of their foreign shipments, is put on sailing vessels and passes round by sea. The growth of the business, so far as the Reading railroad is concerned, is exhibited in the following table, showing the number of tons brought to market each year, from 1841, when the road commenced operations, to 1851.

	Tons.		Tons.
1841	850	1847	1,360,681
1842	49,902	1848	1,216,233
1843	230,254	1849	1,115,918
1844	441,491	1850	1,423,977
1845	820,237	1851	1,605,084
1846	1,233,142		

The coal of the Lackawanna region is mined chiefly at Carbondale. The Delaware and Hudson canal company own a large tract of coal lands in that region. To bring to market the coal which they mine, they have, first, a canal of their own, commencing on the Hudson at Rondout, one hundred miles above New York, and running across the country one hundred and ten miles, to Honesdale. Thence they have a railroad of their own, sixteen miles, from Honesdale to Carbondale.—Auxiliary to this company, and dependent upon it, is the Pennsylvania coal company, who work large collieries, partly their own, partly rented, in the neighborhood of Pittston, just at the mouth of the Lackawanna. The Pennsylvania company have constructed a railroad for the transportation of coal from Pittston, forty-four miles, to Hawley, a port on the Delaware and Hudson canal, eleven miles beyond Honesdale. The coal proceeds thence to Rondout, and so on down the Hudson to New York, in the same manner as that mined at Carbondale. Coal mined by private operators in the neighborhood of Pittston, has to pass the same route, subject to the charges and the regulations of both companies. All the coal of the Lackawanna region, therefore, whether mined by individuals, or by either of the two mammoth companies that have been named, finds a market only through the Delaware and Hudson canal, and is subject to the control of that company. The Pennsylvania company is understood, indeed, to belong substantially to the same parties that own the larger work. The general movement of the coal trade of the Lackawanna region, is exhibited in the following table, showing the amount brought to market every year, from 1829 to 1851:

	Tons.		Tons.
1829	7,000	1841	192,270
1830	43,000	1842	205,253
1831	54,000	1843	227,605
1832	84,600	1844	251,005
1833	111,777	1845	273,435
1834	43,700	1846	320,000
1835	90,000	1847	388,203
1836	103,861	1848	437,500
1837	115,387	1849	454,240
1838	78,207	1850	550,417
1839	122,300	1851	795,059
1840	148,470		

Besides the coal beds that have been mentioned, there is quite a large amount now mined in Wilkesbarre, and lower down, at Shamokin and Lykens' Valley, along the Susquehanna. This is sent down the river, and is consumed mainly in the interior towns of the State for domestic uses, and for furnace operations at Catawissa, Danville, and elsewhere. Some portions of it find a foreign market at Baltimore. The amount produced from these regions is exhibited in the following table:—

	Tons.		Tons.
1839	11,930	1846	205,075
1840	15,505	1847	299,302
1841	21,463	1848	256,627
1842	57,346	1849	304,055
1843	68,000	1850	300,934
1844	127,993	1851	415,099
1845	188,401		

Thus it appears that nearly nine-tenths of all the coal produced from the anthracite coal fields of Pennsylvania, and all of it which finds an Atlantic market, is centred at the head waters of the three small streams, the Lehigh, the Schuylkill, and the Lackawanna, and is under the control of four great companies; the Schuylkill Navigation and the Reading railroad, working the Schuylkill region; the Lehigh company, working the Lehigh region; and the Delaware and Hudson canal company, working the Lackawanna region. The first three of these companies are located in Philadelphia; the last is located in New York. The Delaware and Hudson company aim at the New York market almost exclusively. The Philadelphia companies first supply entirely their own city, and then send what remains, say three-fourths of the whole, to New York and elsewhere. All the companies send more or less to Boston, and coastwise through New England.

By combining the operations of all these various regions into one view, we shall be able to see at a glance the entire growth of the anthracite coal trade

of Pennsylvania, and to form some rational conjectures as to its future developments. This growth is shown in the following table, which is a summary of all the preceding ones, and which exhibits the total amount of coal produced each year, from the beginning of the trade, in 1820, to the close of 1851:—

	Tons.		Tons.
1820	365	1836	684,117
1821	1,073	1837	862,441
1822	2,240	1838	725,697
1823	5,823	1839	797,863
1824	9,541	1840	841,584
1825	34,893	1841	942,312
1826	48,047	1842	1,076,649
1827	63,434	1843	1,240,710
1828	77,516	1844	1,596,378
1829	112,083	1845	1,975,113
1830	174,734	1846	2,284,656
1831	176,820	1847	2,914,852
1832	363,871	1848	3,027,708
1833	487,748	1849	3,164,667
1834	376,636	1850	3,285,980
1835	560,758	1851	4,383,730

In establishing a rate of increase for a trade like this, mistakes necessarily occur, if each year is taken by itself. Some seasons are peculiarly propitious, others equally unfavorable, for mining. The mildness or the severity of the winter operates with equal irregularity upon the consumption of coal. Various other causes operate in the same way. Hence the over-production or the over-consumption of one year must be balanced by those of following and preceding years. Thus, if the year 1838 in the above table be compared with 1837, it will be seen that there was an actual decrease in the production of coal. Again, in 1848, there was an increase of only 112,856 tons, while in 1847 the increase was 630,196 tons. In establishing a rate of increase, therefore, we have divided the time into periods of five years. Such a period is sufficient to allow all mere temporary inequalities and fluctuations to be adjusted, and to show, by the combination of the whole, with much greater certainty, the general movement of the business. In making our calculations, we have gone no farther back than the year 1841, when, for the first time, all the large companies were in successful operation.

During the five years, from 1841 to 1846, the production increased from 942,312 to 2,284,656, or at the rate of 142 per cent.

During the five years, from 1846 to 1851, it increased from 2,284,656 to 4,383,730, or at the rate of 92 per cent.

Combining the two periods, we have a rate of increase in the production and consumption of coal of 117 per cent. every five years.

Is there any reason why this rate should be diminished? We think not. In the first place, population is increasing at the same rapid rate as heretofore. Secondly, coal is only just beginning to be used throughout New England, where, ultimately, it must displace all other means of heat for domestic purposes, as well as of mechanical power for manufacturing purposes. New England, as the oldest settled, and already the most bare of wood, must become, and at no distant day, the greatest consumer of Pennsylvania anthracite. Baltimore will probably supply herself, and to some extent the coast below her; but the great cities of Philadelphia and New York, and the whole Atlantic coast north and east of Philadelphia, must become every year more and more dependant upon the coal fields of the Schuylkill, the Lehigh, and the Lackawanna. This whole north-eastern region of the United States, at once the coldest, the most populous, and the most mechanical, and therefore, by all three reasons, requiring the greatest amount of fuel for domestic and mechanical purposes, has, as yet, only begun to use our Pennsylvania coal. So far from any decrease in the rate of consumption, there are the strongest reasons for believing that the rate will be increased.

But, supposing it to remain stationary, it gives to the coal trade of Pennsylvania, in coming years, a magnitude and importance which it is difficult to over estimate. Instead of an increase of 117 per cent. every five years, let us suppose it to be only 100 per cent.; in other words, suppose the coal trade to double itself every five years. This would

give a business in 1856 of 8,767,460 tons, and in 1861, of 17,534,920 tons. What it may be in 1871, it is, perhaps, not discreet to conjecture. Let it be remembered, however, that the annual consumption of coal in England and Wales is now over 30,000,000 tons, and that according to the present rate of increase, the population of those regions, which Pennsylvania anthracite is ultimately to supply with heat and motive power, will, in 1871, be fully equal to the present population of England and Wales. The movement of the trade certainly indicates that the consumption of anthracite coal, in twenty years from this time, will not be less than twenty-five or thirty millions of tons; in other words, the annual coal crop of Pennsylvania will exceed in value, by more than one-third, the present entire annual cotton crop of the United States.

We shall resume this subject in a few days. We shall then offer some remarks upon the influence of this trade, on the interests of the consumer, as well as of those great corporations engaged in production;—we mean particularly the Lehigh, the Schuylkill Navigation, the Reading rail road, and the Delaware and Hudson Canal Companies.

Pennsylvania Railroad.

This great thoroughfare was commenced in July, 1847, and will be completed, with a single track and sidings in August or September, 1853. It will extend from Harrisburgh to Pittsburgh, connecting the Ohio river with the capital of the State, and, by means of the railroads already finished, on the east, with Philadelphia, the second city in point of population on the western continent, and first in the natural resources of the country tributary to it.

The length of the Pennsylvania railroad will be 248 miles, of which 191 miles are now in successful operation. The whole of the remaining distance is under contract and rapidly advancing towards completion: 18 miles more will be opened in July, and the remainder, except that portion crossing the Allegheny mountains, where the Portage railroad is temporarily used for 28 miles, in September next.

The route of this road, although it intersects in its course all of the mountain ranges of the State, is highly favorable. The Allegheny mountain is the only one not severed to its base by either the Susquehanna, Juniata or Conemaugh rivers, the valleys of which are followed by the railroad through the great gateways nature has opened for its accommodation.

The crest of the Allegheny mountain is passed by a tunnel of 3,570 feet long, and at an elevation of 2,161 feet above tidewater. No stationary power is required on any part of the road. The distance from Harrisburgh to Altoona, at the foot of the eastern slope of the mountains, is 131 miles, and the ascent overcome is 858 feet. The steepest ascending gradient on this part of the road, passing eastwardly, is 10½ feet per mile, and westwardly 21 feet per mile. From Altoona to Pittsburgh the steepest gradient is 52 8-10 feet per mile, with the exception of 9¼ miles of the eastern slope of the mountain, where a gradient of 95 feet per mile, upon straight lines—reduced upon curves according to their radii—is encountered, upon which extra locomotive power will be employed.

The Baltimore and Ohio railroad overcomes this mountain by a maximum gradient, 15 miles in length, of 116 feet per mile, and descends upon the west side at the same rate, for 8 miles. It also overcomes Laurel Hill, which is avoided on our route, by a tunnel 4,200 feet long, with gradients on each side of 105 feet per mile.

The Pennsylvania road is graded for a double track in all the tunnels and rock cuttings, and much of the earth work; the masonry, in all cases, is constructed for a double track; 39 miles of the mountain division, and 34 immediately east of it, it is proposed to lay with a double track at once; and on the rest of the line there will be sidings every five miles.

The superstructure is of the most substantial character. The cross ties of white oak, 8 by 8 inches, 8½ feet long, placed 2½ feet apart, are imbedded in ballast of broken stone, twenty inches in depth. The rails weigh 64 lbs. per yard, except on the steep grade of the Allegheny mountain, where 76 lb. rails are to be used. The buildings are com-

modious and substantial. From Altoona to Pittsburgh, 117 miles, there are only two wooden bridges, each of about 100 feet span; all the others being constructed of stone or iron.

It is believed that the road and its appurtenances throughout will compare favorably with any work of the kind in America. While very little has been expended in unnecessary ornament, no expense has been spared which was required to secure substantial excellence.

Bituminous coal abounds on the western part of the road from Pittsburgh to the summit of the Allegheny mountain, a distance of 105 miles, the road passing in this distance through numerous veins, varying from 10 to 18 feet in thickness. The extensive coal field at Broad Top Mountain, is within 15 miles of the road, at a point 155 miles east of Pittsburgh, and 90 west of Harrisburgh; while in the valley of the Susquehanna, the road is in the immediate vicinity of the Anthracite coal region.

At Harrisburgh commences the Harrisburgh and Lancaster railroad, 36 miles long, now leased and worked by the Pennsylvania railroad company.—This road intersects the Columbia railroad at Lancaster, completing the railroad communication to the city of Philadelphia. The distance from Harrisburgh to Philadelphia is 106 miles, but improvements are now in progress upon the Columbia road which will save about 4 miles, making the whole distance from Philadelphia to Pittsburgh 350 miles.

At Harrisburgh the line of railroads leading to Baltimore and Washington also commences. The distance from Harrisburgh to Baltimore is 85 miles, and from Pittsburgh to Baltimore, by this route, 333 miles.

The above Eastern and Southern connections are completed.

Pittsburgh, the western terminus of the Pennsylvania railroad, is a most important manufacturing city, and has been appropriately styled the "Birmingham of America." Its population including that of the suburban towns is about 100,000. The position of the city, on the Ohio, at the head of navigation for first class steamers, connects it, through the Mississippi and its tributaries, with the South and West by several thousand miles of continuous steamboat navigation, which alone will draw to it sufficient business for transportation to and from the seaboard to insure the success of the Pennsylvania railroad. But as this navigation is subject to interruptions from low water, regularity of intercourse, as well as a direct connection with the interior and the Lakes, seemed to demand railroad facilities to secure the control of the travel and carriage of valuable freights to this route.

The railroads and canals hitherto constructed to accommodate the population of Ohio and Indiana have generally a north and south direction, connecting the fertile central region with the Ohio river and Lake Erie. Within a few years the importance of a more direct eastern communication with the seaboard has been appreciated, and several great leading lines have been projected and commenced to secure this object. That which has made most progress is the Ohio and Pennsylvania railroad, commencing at Pittsburgh, and extending westwardly through the most fertile and populous part of Ohio, to the new town called Crestline, on the Columbus and Cleveland railroad, a distance of 180 miles. From Crestline a railroad is completed to the city of Cincinnati, on the Ohio river; another has been commenced to Fort Wayne, in Indiana, which will be extended to Chicago, on Lake Michigan; another will be completed in the coming twelve months from Crestline, through Bellefontaine and Indianapolis, to Terre Haute, on the western boundary of the State of Indiana, a distance of 275 miles. The extension of this to the city of St. Louis, on the Mississippi, 170 miles further, has been commenced. Of the completion of this entire direct continuous railroad from Philadelphia to St. Louis, a distance of 976 miles, within two years, there can be no doubt. The region traversed by this route is equal in fertility to any portion of the globe, and is inhabited by a people who have the sagacity and enterprise to improve and draw from it all that the bountiful hand of the Creator has designed for it.

The Ohio and Pennsylvania railroad is now completed to Massillon, 104 miles. At Alliance, 84 miles from Pittsburgh, it intersects the Cleve-

land and Pittsburgh railroad, which is completed from that point to Cleveland, making a direct railroad communication between Pittsburgh and Lake Erie, 140 miles long. From Cleveland to the city of New York, by way of the Pennsylvania railroad, the distance is now 40 miles shorter than by the New York and Erie railroad, and must consequently command the travel from the western States to that commercial emporium.

The Pittsburgh and Steubenville railroad will connect this line with the Steubenville and Indiana railroad, and accommodate the centre of Ohio; while the Hempfield railroad from Greensburg, 30 miles east of Pittsburgh, to Wheeling, will connect it with the southern portions of that State, through the Marietta, Chillicothe and Cincinnati road, upon which line an unbroken gauge of track may be secured to St. Louis. These form the leading eastern communications in Ohio, already alluded to; and to these, and especially the Ohio and Pennsylvania road, all north and south lines from Cleveland, Sandusky, Lexington, Louisville, Evansville, etc., will become tributaries, concentrating the trade and travel of the great Mississippi basin, and pouring it over the Pennsylvania railroad as the main trunk connecting the commercial and manufacturing interest of the east with the rich agricultural regions of the west.

Calculations of the amount of transportation and travel that will pass over this great highway, appear, in view of these facts, to be superfluous. All its rivals are inferior in character, more expensive to work, and encumbered by a disproportionate debt. It has therefore nothing to fear from rivalry, either on the north or the south; and its business will only be limited by the capacity of a first class double track railroad.

In its present incomplete condition, it yields a net revenue of more than eight per cent upon the capital expended in its construction, and has attained a tonnage, ere it has reached its western terminus, nearly as great as can be carried with regularity upon a single track road.—*Philadelphia North American.*

Pennsylvania.

Below we give the recent law passed by the Legislature of this State, providing for a new loan of \$5,800,000; of which, \$800,000 is to be applied to the construction of the North Branch canal, and \$5,000,000 to refunding a portion of the present debt of the State.

An Act to provide for the immediate completion of the North Branch Extension of the Pennsylvania Railroad.

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, that the Governor of the Commonwealth be and he is hereby authorized to borrow on the faith of the Commonwealth, and of the revenue hereinafter mentioned, and which is hereby specifically pledged for the payment of the interest and repayment of the principal, the sum of eight hundred and fifty thousand dollars, and issue certificates of loan therefor, redeemable in 30 years from date, to be paid into the internal improvement fund, and appropriated to the expenditures under this act, the law loan to bear interest at a rate not exceeding six per cent per annum, payable half yearly in specie, on the first day of January and July, to be termed the North Branch canal Loan.

Sec. 2. That there shall be annually set apart by the commissioners of the internal improvement fund the revenue accruing on said canal, from and after the passage of this act, for the payment of the interest and final liquidation of the debt hereby authorized, and it shall be the duty of said commissioners, after paying the interest annually, to invest the surplus, together with its accumulation of interest, in the said loan, or in any other loan of the Commonwealth; if said loan cannot be purchased at its par value, the said investment to form a sinking fund for the redemption of the principal at maturity.

Sec. 3. That the Governor and State Treasurer be, and they are hereby, authorized and empowered to borrow on the faith of the Commonwealth, during the year 1852, at such times and in such

amounts as they may deem best for the interest of the State, any sum not exceeding \$5,000,000, and issue bonds of the Commonwealth for the same, bearing a rate of interest not exceeding five per cent per annum, payable semi-annually, which bonds shall not be subject to taxation for any purpose whatever, and shall be reimbursable in twenty-five years from their date; and the sum so borrowed shall be applied to the payment of the six per cent. loans that are payable at the option of the Commonwealth, after the years 1845 and 1847, to the cancellation of the certificates issued to domestic creditors and the outstanding and unclaimed interest certificates, in the manner hereinafter provided; and the balance of said five millions shall be applied to the extinguishment of any of the five per cent. bonds of the State now outstanding, and for no other purpose.

Sec. 4. That the bonds for said loan shall be issued in sums of either \$1,000, \$5,000 or \$10,000, each with coupons or interest certificates attached in sums equal in amount to the semi-annual interest thereon, which certificates shall be redeemable in gold and silver or an equivalent, on the 1st days of February and August in each and every year, at such place as may be designated by the Governor and State Treasurer; and said officers shall procure the engravings for such bonds and certificates and cause the same to be signed and countersigned as hereinafter directed, and take such other steps as may be necessary to carry out the true intent and meaning of this act, and the Governor is hereby authorized to draw warrants on the State Treasurer for such sums as may be necessary to pay the proper expenses incident to the negotiation of such loan, and said warrants shall be paid out of any moneys in the Treasury.

Sec. 5. The State Treasurer shall advertise for at least two months in one newspaper in Boston, one in New York, and one in Philadelphia, and one paper, in London, and one in Amsterdam, and one in Paris, in Europe, inviting sealed proposals for the loan herein authorized, or any part thereof, which proposals shall state the price intended to be paid in gold and silver, or its equivalent, by the bidder of each thousand dollars of such loan, and at noon on the day appointed for that purpose, the State Treasurer and Auditor-General, in the presence of the Governor and Secretary of the Commonwealth, and of such other persons as may attend, shall proceed to open said proposals and allot the loan to the highest and best bidders; whereupon bonds shall be issued to the person or persons entitled to said loan as hereinbefore provided, which bonds or certificates of loan shall be signed by the Governor and countersigned by the State Treasurer and Auditor-General, and the State Treasurer shall sign or authorize said coupons or certificate of interest to be signed; provided that in making proposals for the loan authorized by this act, the holder or holders of any of the bonds of the Commonwealth, of certificates for interest and holders of domestic creditor certificate shall be authorized to bid for any part of said loan to the full amount of such certificate or certificates, together with the unpaid interest thereon, provided also that at the time of making proposals for the said loan, application may be made for any part thereof at an interest of four per cent, or a less rate. Upon condition that the loan shall be for a greater period, and not exceed five years, exempt from taxation with the interest thereon payable semi-annually, the Governor is hereby authorized and empowered to entertain and carry into effect such proposition, should he deem it advisable for the best interest of the Commonwealth, provided further, that the notice to be issued in Europe for proposals shall precede the notice in this country at least one month.

Sec. 6. That immediately after the negotiation of the loans herein provided for, the State Treasurer shall give notice in one newspaper in Boston, one in New-York and one in Philadelphia, to the holders of all certificates of loan then due, and to the holders of certificates issued to domestic creditors, to present the same at his office at Harrisburg, or at such place as he may designate in Philadelphia, for final payment; and in case such holders shall refuse or neglect to surrender the certificates aforesaid, the interest thereon shall cease to be paid by the State within 60 days of the time of payment fixed to such notice; provided that it shall be lawful

for the Governor and State Treasurer, in addition to gold and silver, to receive at par in payment for the loan herein authorized, any of the bonds of the State domestic creditor certificates, and the certificates issued for unpaid interest, the certificates of loan paid and cancelled under the provisions of this act, after having been copied into a book to be kept in the office of the State Treasurer for that purpose, shall be destroyed by the State Treasurer and Auditor-General in the presence of the Governor and Secretary of the Commonwealth.

Sec. 7. That when the loan provided in this act shall have been negotiated, and the indebtedness cancelled as aforesaid, it shall be the duty of the State Treasurer to ascertain as near as possible the aggregate amount of interest saved to the Commonwealth by the provisions of this act, as compared with the interest now paid, deducting all contingent expenses, and shall, at the time of making their next semi-annual payment of interest, and semi-annually thereafter, pay over to the Commissioner of the Sinking Fund a sum equal to the amount so saved, and all premiums which may be received under the provisions of this act, and all unclaimed balances, if any, shall be also paid over to the Commissioners of the Sinking fund, to be applied to the cancellation of the future debt in the same manner that all other receipts to that fund are applied.

Sec. 8. That the Governor and State Treasurer be, and they are hereby further authorized and empowered to issue certificates of loan in the manner and form provided for in the foregoing sections of this act, reimbursable at a period not exceeding thirty-five years from their date to any and all such holders of the five per cent. loan of the Commonwealth as may signify their willingness to receive new certificates of loan, bearing an interest of four per cent. or a less rate per annum, exempted from taxation, with coupons or interest certificates attached, payable semi-annually in gold and silver, and they shall further have the right to give the necessary notice and take such other steps as may be proper to accomplish the true intent and meaning of this section; and it shall be the duty of the State Treasurer to communicate to the next Legislature a detailed statement of the proceedings under this act, showing the bids received for the loan, the names of the parties making such bids, and such other matters as may be deemed interesting and useful, provided that the certificates of loan authorized by an act to provide for the immediate completion of the North Branch Extension of the Pennsylvania Canal, approved April 2, 1852, shall not be subject to taxation for any purpose whatever, and it shall be the duty of the Governor to cause coupons to be attached to said certificates in the same manner and form as those required to be attached to the bonds to be issued under the provisions of this act, and provided that no bonds, below par shall be entertained for any of said loans; and provided further, that proposals for the loan to complete the North Branch Canal shall be forthwith published for at least thirty days in one newspaper in Philadelphia, one in New-York, and one in Boston.

F. W. HUGHES,
Secretary Commonwealth of Pennsylvania.

Ohio.

The Akron Branch Railroad has made an arrangement with the Cleveland and Pittsburgh railroad, by which as soon as the road is completed to this point, passengers will be carried through to Cleveland for \$1. They have also made a satisfactory arrangement in regard to through freight. An arrangement has also been made between the Akron road and the canal Packet line of Chamberlin & Co. The latter now connect with the cars at C. Falls daily, and carry passengers through in one day to Massillon. The same connection will be continued, when the road is completed to this point, which will probably be about the first of July. The season has been an extremely unfavorable one for work on the railroad, or the cars would have been here by the 1st of June.

Iron has been secured for the road between Akron and the Ohio and Pennsylvania road, so that there will be no delay in the prosecution of the work southward; although further subscriptions of stock will be necessary to secure its completion to the junction.

The efforts of the president and directors of the Akron Branch have been indefatigable, to secure the early completion of the work allotted to them; and they deserve great credit for the success that has attended them thus far.—*Summit Beacon*.

American Railroad Journal.

Saturday, May 15, 1852.

Double Track for the Erie Railroad.

We learn that contracts have been made for the construction of 125 miles of double track for the Erie railroad, viz: from Sufferns to Otisville, 45 miles; from Great Bend to Chemung railroad junction, 77 miles; and from Corning to Painted Post, 3 miles—making in all 125 miles. The iron is to be furnished by the company. The contracts embrace all other items of cost, for which the contractors take the stock of the company.

The above is the commencement of a very important movement, which contemplates a double track for the whole line of the road, or that portion of it between Piermont and Hornellsville, a distance of 318 miles. The portion already provided for will materially increase the capacity of the road for business, and will at the same time diminish its liability to accidents.

There is no road in the country in greater need of a double track than the Erie. As soon as the Susquehanna valley is reached, a large number of important collateral lines radiate from the main trunk, all of which will bring to it a large amount of business. On the north these lines are, the Syracuse and Binghamton, which is to be at once commenced, and which will be some 75 miles long; the Cayuga and Susquehanna railroad, in operation 35 miles to Ithaca, and which will probably be extended up the lake 40 miles further; the Canandaigua and Niagara Falls railroad, 160 miles, taking the whole distance from Elmira; the Buffalo, Corning and New York City railroad, 130 miles; and the Buffalo and New York City railroad, 90 miles—making in all 530 miles of branch lines running north: a greater extent of road than the main trunk. To this should also be added the Genesee Valley railroad, making 100 miles more, provided this road should be extended up the valley to the Erie road at Cuba.

On the south are, first the Lackawanna and Western railroad, 50 miles long, connecting with the Erie at Great Bend, and opening an outlet for the great northern coal field of Pennsylvania.—This road will prove a most important feeder for the Erie. The next is the road running to the Blossburgh coal mines, a distance of 40 miles.—The third branch in a southerly direction will be the proposed road down the Allegheny valley to Pittsburgh, a distance say of 180 miles. We regard the construction of this road as certain. When complete, it cannot fail to secure to the Erie road a large traffic between the west and New York. These branches will add 270 miles to the above aggregate, making an extent of road tributary to the Erie of some 800 miles, or about double the length of the main trunk. All these branches traverse one of the richest and most productive portions of the Union. Those on the south all traverse the great anthracite and bituminous coal regions of the State of Pennsylvania.

The above statement conclusively proves the necessity of a double track on the Erie road to enable it to accommodate all the business offering, and to operate with regularity and economy. We are glad to see the initiatory steps taken to accomplish

so desirable a result. The double track under contract will be completed, we presume, the present year.

Fairbanks' Patent Scales.

We have not until recently been made aware of the vast extent to which the manufacture of these Scales is carried on. By reference to our advertising columns it will be seen that nearly ninety railroads in the United States have these scales almost exclusively in use for the weighing of their freights.

The New York and Erie railroad alone has in use eight large Track Scales for cars, capable of weighing forty tons each—many Depot Scales of six tons capacity, and an almost unlimited number of smaller ones ranging from 5,000 lbs. to 600 lbs. each.

The Reading railroad at its terminus on the Delaware near Philadelphia, is supplied with twenty-six ten ton track scales, which have weighed one million two hundred thousand tons of coal annually, during the last six years, retaining their adjustment without expense for repairs.

Nearly all the other railroads in the United States are also supplied in a greater or less proportion.

There is also an establishment in Liverpool for the manufacture of these scales, a patent having been obtained by the Messrs Fairbanks' several years since, for the whole of Great Britain; and we learn that nearly all the great lines of railway in that kingdom are also furnished with "Fairbanks' Scales."

These gentlemen have within the last three years achieved a still greater triumph in the construction of the ponderous Weigh Lock Scale for the weighing of canal boats with their entire cargoes. There are in operation at the two most important points on the Erie canal—Albany and West Troy—two of these mammoth weighing machines of over 400 tons capacity, which have given great satisfaction to the canal commissioners and other officers.

They have also in operation two nearly as large in the Delaware and Hudson canal—one in the Tide Water canal—one at Cleveland, Ohio—and three others in course of construction for the Ohio canals—one near Cincinnati, one at Toledo, and one at Carroll.

When we take into view the countless number of these articles in use in every city and town and village in the United States, all the various modifications adapted to the business of railroads, canals, warehouses, foundries, stores, etc., and remember that they are scattered all over the commercial world—in the East and West Indies, China, the Sandwich Islands, South America, California, etc., and that they are graduated to the standards of various countries, we can call to mind no one instrument that can be regarded as so universal an arbiter between owner and carrier, or between buyer and seller, as this same Fairbanks' Scale. There can be no better testimony of the accuracy of these scales than their universal use.

We may justly feel proud that these are among our American manufactures.

New York.

Buffalo and Corning Railroad.—The cars have commenced running twenty-four miles of the Buffalo, Corning and New York railroad. The road is in good condition, and the Bath Courier says, the number of passengers and amount of freight which passes over it daily, are far beyond the expectations of the most sanguine,

To Mining and Civil Engineers, Surveyors, etc.

A YOUNG MAN, who has been engaged for the last six years with eminent Engineers in Scotland, is desirous of a situation. Has had considerable practice in the working of mines—being a good draughtsman, and in possession of engineering instruments.

Address ENGINEER, care D. H. ARNOT, 1m20* 50 Wall st., New York.

To Contractors & Engineers.

A SITUATION is wanted by a Civil and Mechanical Engineer, a good calculator and accurate draughtsman. Address G. D. H., 31 Jay st., New York.

Kentucky.

Covington and Lexington Railroad;

Mr. A. L. GREER, Agent of the Covington and Lexington railroad company, reached home, a few days since, from New York, whither he had been on business connected with the road. We learn that Mr. G. accomplished the objects of his mission in the most satisfactory manner. Between \$100,000 and \$200,000 of Covington bonds were sold at rates between 91 and 95, and \$40,000 of the Fayette County bonds at a rate above 90.

Mr. GREER contracted with a responsible company for the transportation of 5000 tons of iron from Pittsburg, three hundred tons to be delivered a week, and the delivery to commence on the 10th of this month. In this contract and by procuring a reduction of tolls, Mr. G. saves to the R. R. Co. between \$12,000 and \$15,000 on the estimated cost of transportation.

Illinois.

Terre Haute and Alton Railroad.—We learn from the President of this company, that a contract has been closed with a party of wealthy and experienced eastern contractors, for the construction of the above road within three years from the present time. We are further assured that it is the intention of the contractors to complete the road in much less time; and as they are able to carry out whatever they may undertake, we may expect to see another line of railroad pushed through to the Mississippi river in all of 1854.

The distance between Terre Haute and Alton by the line of the above road will be about 173 miles. The route is a remarkably favorable one. The country traversed is of unsurpassed fertility, and is very well settled. The above is a very important project for the city of Alton, and cannot fail, in connection with other roads terminating there, to make it a large and flourishing town. It will also secure to the Indiana roads an outlet to the Mississippi river, a connection which is now felt to be absolutely essential to develop their business capacities to the highest extent.

Ohio Central Railroad.

The counties of Muskingum, Belmont and Guernsey, Ohio, have each subscribed \$100,000 for the extension of the above road from Zanesville to Wheeling, and have issued their bonds for the above amounts, to the company.

The people of Marshall county, Virginia, are making an effort to induce the Ohio Central company to run their line to the mouth of Grave creek, on the Ohio, instead of Wheeling, and propose to subscribe \$250,000 to the stock of the road upon the above condition.

New York.

Sodus Bay and Southern Railroad.—We learn that preparations are being made to place this road immediately under contract.

Stock and Money Market.

We continue to note a favorable state of the money market. Railroad securities are in request at advanced rates. The better known bonds have been mostly taken out of the market, leaving their place to be filled by others of more recent date.

Seven per cent. bonds of new roads in operation are held at par in this market. For some, even a higher price is asked, from the value attached to the convertible clause.

There is now no difficulty in negotiating at fair rates, bonds of new works entitled to credit. A good degree of confidence prevails in reference to railroad projects which is strengthened by the result of every new road going into operation.

During the present year a large extent of line will come into operation, which will at once render productive a large amount of capital which has been expended upon unfinished roads. The present favorable condition of the market will enable most of our lines in progress to secure the means for their completion should any financial crisis threaten. On the whole, the prospect for our railroads is very encouraging for the present year at least.

During the month of April, fifteen thousand four hundred and three passengers were carried over the Ohio and Pennsylvania Railroad.

Cash received from passengers.....\$13,400 40
Cash received from freight trains..... 4,341 11

Total.....\$17,745 51

The receipts of the Saratoga and Washington railroad company, from passengers and freight, for the first three months of the present

year, are.....\$20,807 74
The same months last year..... 17,107 56

Increase over 1851.....\$ 3,700 18

The receipts of the Michigan General railroad company, for the month of April in each of the past two years, were as annexed:

MICHIGAN CENTRAL RAILROAD.

	1851	1852.
Receipts for freight.....	\$39,849 94	\$21,511 12
Receipts for passengers.....	63,046 95	35,783 24

Total receipts.....\$92,896 89 \$57,294 36
Decrease..... 35,602 53

The earnings of the Galena and Chicago railroad from May 1, 1851, to April 1, 1852, eleven months, amounted to.....\$192 269 64
Expenses for said 11 months..... 78,859 00

Net earnings for 11 months.....\$113,410 64
The gross earnings for the corresponding period to 1st April, 1851, on the average of length of road in operation, say 42 miles, were..... 116,082 19

Excess of gross revenue last year over net revenue this..... \$3,671 55

The earnings per mile have increased from \$2,764 to \$3,258.

The receipts of the New York and New Haven railroad for April were.....\$56,317 89
Do April, 1851..... 51,245 15

Increase, nearly 10 per cent..... 5,072 74

The shipments of specie for the week ending May 1, 1852, were.....\$556,572
Previously reported..... 7,232,765

Total for 1852.....7,789,333

The following statement will show the amount of tolls collected at the Collector's office in Albany from the commencement of canal navigation to, and including, the week ending May 7th. Also the amount collected during the same number of

days from the commencement of canal navigation last year:

1851—April 15 to 25, inclusive.....	\$23,713 26
26.....	3,228 73
28.....	3,552 28
29.....	2,459 71
30.....	3,111 08
May 1.....	2,286 67
2.....	2,373 58

Total.....\$39,725 41

1852—April 20 to 30, inclusive.....\$19,269 08

May 1.....	1,815 19
3.....	3,089 56
4.....	1,678 91
5.....	1,673 43
6.....	954 83
7.....	1,545 93

Total.....\$29,025 93

Excess of 1851, \$9,699 48.

It is proper to state, says the Albany Argus, in explanation of the large decrease this year in tolls, that is by no means a consequence of a decrease of the quantity of merchandise cleared from tide water, but the result of the large reduction this year of the rates of toll.

We are assured that the amount of merchandise cleared this year from the Collector's office in Albany, greatly exceeds the quantity cleared during the corresponding period last year, and that had the rates of toll remained as they were then, the tolls this year on merchandise would have exceeded in the like proportion the tolls for the same period last year.

Railway Share & Stock List;

CORRECTED WEEKLY FOR THE
AMERICAN RAILROAD JOURNAL.

NEW YORK, MAY 15, 1852.

GOVERNMENT AND STATE SECURITIES.

U. S. 5's, 1853.....	102½
U. S. 6's, 1856.....	108½
U. S. 6's, 1860.....	114
U. S. 6's, 1862—coupon.....	114
U. S. 6's, 1867.....	118
U. S. 6's, 1868.....	118½
U. S. 6's, 1868—coupon.....	120½
Indiana 5's.....	90
Indiana 2½.....	49
" Canal loan 6's.....	90
" Canal preferred 5's.....	44½
Alabama 5's.....	91a92
Illinois 6's, 1847.....	76
Illinois 6's—interest.....	47½
Kentucky 6's, 1871.....	109
Massachusetts sterling 5's.....	105
Massachusetts 5's, 1859.....	100½
Maine 6's, 1855.....	103
Maryland 6's.....	105
Michigan.....	—
Mississippi.....	—
New York 6's, 1854-5.....	103
New York 6's, 18-0-61-62.....	110½
New York 6's, 1864-65.....	115½
New York 6's, 1 y., 1866.....	115½
New York 5½'s, 1860-61.....	106
New York 5½'s, 1865.....	107
New York 5's, 1854-55.....	—
New York 5's, 1858-60-62.....	100½
New York 5's, 1866.....	105
New York 4½'s, 1858-59-64.....	97
Canal certificates, 6's, 1861.....	95
Ohio 6's, 1856.....	106
Ohio 6's, 1860.....	108½
Ohio 6's, 1870.....	112½
Ohio 6's, 1875.....	116
Ohio 5's, 1865.....	104
Ohio 7's, 1851.....	100
Pennsylvania 5's.....	96
Pennsylvania 6's, 1847-53.....	101½
Pennsylvania 6's, 1879.....	108
Tennessee 5's.....	87½
Tennessee 6's, 1880.....	106
Virginia 6's, 1886.....	109

CITY SECURITIES—BONDS.

Brooklyn 6's.....	106½
Albany 6's, 1871-1881.....	107
Cincinnati 6's.....	99
St. Louis.....	95½
Louisville 6's 1880.....	95
Pittsburg 6's, 1869-1871.....	97
New York 7's, 1857.....	108
New York 5's, 1858-60.....	100½
New York 5's, 1870-75.....	104
New York 5's, 1890.....	103½
Fire loan 5's, 1886.....	101½
Philadelphia 6's, 1876-90.....	107
Baltimore 1870-90.....	105½
Boston 5's.....	101

RAILROAD BONDS.

Erie 1st mortgage, 7's, 1868.....	115½
Erie 2d mortgage, 7's, 1859.....	107½
Erie income 7's, 1855.....	98
Erie convertible bonds, 7's, 1871.....	96½
Hudson River 1st mort., 7's, 1869.....	106½
Hudson River 2d mort., 7's, 1860.....	96½
New York and New Haven 7's, 1861.....	105
Reading 6's, 1870.....	82
Reading mortgage, 6's, 1860.....	87½
Michigan Central, convertible, 8's, 1860.....	104½
Michigan Southern, 7's, 1860.....	97
Cleveland, Col. and Cin. 7's, 1859.....	105½
Cleveland and Pittsburg 7's, 1860.....	98½
Ohio and Pennsylvania 7's, 1865.....	102½
Ohio Central 7's, 1861.....	95½

RAILROAD STOCKS.

[CORRECTED FOR WEDNESDAY OF EACH WEEK.]

	May 12.	May 5.
Albany and Schenectady.....	104½	103½
Boston and Maine.....	107½	106½
Boston and Lowell.....	108½	107½
Boston and Worcester.....	103½	102½
Boston and Providence.....	91	90½
Baltimore and Ohio.....	75	68
Baltimore and Susquehanna.....	32	32
Cleveland and Columbus.....	—	—
Columbus and Xenia.....	—	—
Camden and Amboy.....	146	142½
Delaware and Hudson (canal).....	117	117½
Eastern.....	99½	96½
Erie.....	89½	89
Fall River.....	99½	99
Fitchburgh.....	105	104½
Georgia.....	—	—
Georgia Central.....	103	—
Harlem.....	72½	74½
" preferred.....	114½	114½
Hartford and New Haven.....	128	123
Housatonic (preferred).....	35	35
Hudson River.....	62	63
Little Miami.....	—	—
Long Island.....	21½	21½
Mad River.....	—	—
Madison and Indianapolis.....	101	101½
Michigan Central.....	100	100
Michigan Southern.....	116	114½
New York and New Haven.....	112	111½
New Jersey.....	134	132
Nashua and Lowell.....	106	104
New Bedford and Taunton.....	117	117
Norwich and Worcester.....	58	58
Ogdensburg.....	27½	27½
Pennsylvania.....	—	—
Philadelphia, Wilm'gton & Balt.....	29	32
Petersburg.....	—	—
Richmond and Fredericksburg.....	93	93
Richmond and Petersburg.....	35	35
Reading.....	78½	78½
Rochester and Syracuse.....	116½	116
Stonington.....	55	55
South Carolina.....	—	—
Syracuse and Utica.....	128	128
Taunton Branch.....	115	115
Utica and Schenectady.....	132	132½
Vermont Central.....	17½	19½
Vermont and Massachusetts.....	20½	21½
Virginia Central.....	—	—
Western.....	106½	104
Wilmington and Raleigh.....	57½	57½

Zinc Paint.

The attention of our readers is called to the Advertisement of Zinc Paint in another column.

Indiana.

A Profitable and Well Managed Road.—A meeting of the stockholders of this road was recently held in this city, to hear the report of its president. Mr. Brough, as to its condition, prospects, etc., Mr. Brough stated that the business of last year left a surplus of \$40,000, after paying ten per cent dividends. The increase of three months of 1852 over same time in 1851 had been 26 per cent., with the Ohio river closed with ice for three weeks in January. During February and March the increase was 47 per cent., and for three first weeks in April 33 per cent. The current year's revenue, the president felt confident, would give a 10 per cent. dividend, with a surplus of \$100,000. In order to show the rapidly increasing business of the country, the president gave some comparative statements of the articles of produce in 1851 and 1850. In several instances the increase of the latter over the former year more than equalled the entire transportation of the same article in any year prior to 1850. For instance, the increase of bushels of wheat was 203,804—being greater than the whole transportation in 1849. In corn, 366,127 bushels, being greater than any two years prior to 1850.—And this increase, he showed, was still going on, and with the developments of the trade of the country, and the position of the road, he did not fear the influence of any other roads now constructing.—The contingent interest of the State in the road, which, from January, 1853, was a reservation of one-third the net earnings of the road, has been purchased, under authority of an act of the General Assembly. The payment is \$600,000 of 2½ per cent stocks of the State, or \$300,000 in money, to be made in four instalments from 1st January, 1854, to 1st January, 1857; it made in money, to bear interest from 13th January, 1853. These payments the president said could be made from the surplus earnings of the road, without impairing its dividend; and he recommended that this course be adopted, leaving it competent for the stockholders to hereafter determine what course should be adopted to give them the proper credit for these payments.

The directors have recommended that a new termination be constructed, to avoid the inclined plane at Madison. This will be about nine miles in length, and the cost is estimated at \$200,000 to \$250,000. Mr. Brough enforced the recommendation of the directors, by exhibiting the great expense of working the inclined plane, apart from the danger to property and life. He recommended the issue of \$200,000 of bonds under the existing mortgage, sale limited at par, and pledged his exertions, with this provision of the funds, to the early commencement and completion of the work. Resolutions sustaining both these recommendations were unanimously adopted, and also cordially approving the management of the road by the president and directors.

Hempfield Railroad.

Contracts, says the Wheeling Gazette, were made last week for 13 of the heavy sections of the Hempfield railroad. We understand that the bids allotted, were to the best and most energetic contractors, and that they will press forward the work with vigor to admit of the letting of the light sections to advantage. These lettings include sections one and two miles from Wheeling, and three miles beyond Washington. The road will doubtless be finished as far as the Monongahela in a year and a half.

Alabama.

Montgomery and West Point Railroad.—The annual meeting of this company was held at Montgomery on Monday, the 12th inst. From the report of the President submitted on the occasion, the Journal of that city extracts the following very flattering account of the condition of the business of the road.

The receipts for the year ending 1st March, 1852, have been—

From passengers.....	\$91,292 84
" freight.....	61,206 29
" transportation of the mails.....	21,106 32

Total.....\$173,542 43

The expenses of management and repairs have been.....\$97,463 19

Interest paid on Loans.... 24,790 73—122,253 92

Leaving a nett increase of.....\$51,288 51

The receipts of the road for the last six years show as follows—to 1st March of each year:

1847.....	\$55,787-97
1848.....	79,706-83
1849.....	95,665-90
1850.....	123,781-61
1851.....	140,057-09
1852.....	173,542

This shows a steady increase in the business of the road.

This company have passed over the road:

This year...35,527 passengers—52,158 bales cotton.
Last year...30,032 passengers—25,989 bales cotton.

Increase...5,495	7,169
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Illinois.

Alton and Sangamon Railroad.—We are gratified to be able to state, says the Alton Telegraph, that the work on the Alton and Sangamon railroad continues to progress with increasing rapidity.—The track is now across Coup's creek—three miles and a half, having been laid in the course of last week—and there is material enough deposited at Springfield for eight miles more. The steamer Buena Vista went up to Naples on Tuesday, with a quantity of iron intended for the road; and the Newton Waggoner followed yesterday with 4,500 ties for the same destination. We hope to have, ere long, the gratification of announcing the completion of the whole line.

Illinois.

Savanna Branch Railroad.—The annual meeting of the Savanna Branch railroad company was held at Savanna on the 20th ult., the following gentlemen were elected directors for the ensuing year:

Porter Sargent, L. H. Bowen, N. Halderman, Dr. J. G. Sugg, N. D. French, Dr. E. Woodruff, Garner Moffatt, E. A. Wood, D. Emmert, L. Gross, M. Dupuis, M. P. Pierce, and J. B. Rhodes.

The company propose to connect with the Galena and Chicago road, at or near Freeport. The road will be about 30 miles long. It is estimated that \$150,000 will prepare the road bed for the iron. About \$50,000 have already been subscribed, and it is believed that the balance can be obtained without difficulty. Measures are to be immediately taken to get up the stock, and put the road under contract.

The Mobile and Ohio Railroad.

The county court of Madison county, Tennessee, has voted a subscription of \$250,000; that of Gibson county \$150,000; that of Obion county \$50,000; and that of McNairy county \$50,000, to the stock of the Mobile and Ohio railroad company to be expended in that State.

Indianapolis, Lake Erie and Pittsburgh.

It is highly gratifying to learn, says the Indiana Sentinel that we have a certain prospect of a continuous line of railway this season, from our city to Lake Erie at Sandusky, and Cleveland, and to Philadelphia by Pittsburgh. Our readers of course know, that the roads from Sandusky and Cleveland to Cincinnati, have long been completed. The former running through Bellefontaine, and the latter through Gallion; and that the line from Pittsburgh to Union, where it connects with our Bellefontaine road, passes through Gallion and Bellefontaine. This Pittsburgh line, we learn, will be complete this year, which, with the construction of this end of the line, which will soon be done, gives us a direct and continuous railway to Sandusky, Cleveland and Pittsburgh. When this line shall be opened, we shall soon see some at least of the crowds of passengers, from the East, that are now forced around our State on the Ohio river, and railways on the East, the Michigan lake and railroads on the North, and the Illinois roads on the West, for the want of a railway through our State. We shall become better acquainted with our northern and eastern brethren, and they will know more of the advantages of our beautiful country, for residences and business.

The Remington Bridge.

The following from an Alabama paper gives an account of this great humbug which we took care to expose when first brought into notice.

Remington's bridge, after standing for months in a very tottering and irregular condition, has now broken in two about the middle, and fallen into the ravine. Soon after its completion it was tilted to one side by the wind and its own weight and never righted—the slope being too great to allow the passage of vehicles. It stood unused, a monument of humbugery, for more than a year; and we presume that its destruction will convince even the most decided believers in Remington's theory, that his plan will not answer for long and heavy structures, which, as in the case of the bridge here will break with their own weight, after losing their original balance, by the action of the weather. The bridge, we believe, was never accepted by the Council, and the city therefore loses nothing by its unfitness and demolition. It was built under the supervision of Remington himself, and must have been a costly work.

Commerce of Virginia.

It may attract the attention of the people to the depressed condition of the commercial affairs of Virginia, by referring to the official reports in the matter. It is seen that the amount of foreign imports of the United States, for the last year, was one hundred and forty seven millions eight hundred and fifty-seven thousand, four hundred and thirty-nine dollars. Allowing about eight and a half dollars to each individual, according to the last census, the quota, therefore, for this State, should have been \$10,538 376, whilst her actual imports were only \$241,935. During the same period there came into the ports of the United States 20,200 vessels—of which 146 only entered Virginia—whilst her share should have been 1467. Let us imagine the vast difference in the thrift and prosperity of our seaport towns, and of the whole State, that will ensue when the navigation and commerce that properly belongs to us, is sustained—when we see fifteen hundred vessels from foreign ports annually arriving at our towns is it not, therefore highly important that the people should be awakened as to their true interests? and urged to take incipient steps to renovate their condition?

Should not the above fact, says the Richmond Republican, arouse the attention and excite the energies of our Legislature and our people?—We possess at this moment greater natural advantages for commerce than any other State of the Union. The geographical position of Virginia and her noble harbors and water courses, should make her the

first commercial State in the Union. Such she was once, and a house is still standing in the solitary and deserted streets of Yorktown to which the merchants of New York once repaired to obtain their goods from Europe. Nature has not changed since then. The same broad river rolls there still, and the same wide ocean spreads out its inviting arms. Shall we not seize again these advantages, and by pushing on railroads, and canals, lay the foundation of as great a trade as New York now enjoys?

Allegheny Valley Railroad.

Below we give a portion of the address of the President of the road, Hon. W. T. Johnson, to the public. We have often spoken of the importance of the above project, both as a local work, and from its connections with the railroad system of the country. We believe it must be speedily built. We doubt whether there is a line of railroad in the United States, of equal length which will traverse a country possessing greater or more valued resources. Both in the excellence of its soil and in mineral wealth it is unsurpassed. It will prove a great convenience to the western New York roads in opening a new avenue to the Ohio River. It will prove a most useful feeder to the Erie road and will be likely to receive substantial aid from this city.

The country traversed by the Allegheny Valley railroad is deeply interesting from the vastness of its agricultural and mineral resources, and the great susceptibility of enlarged improvements and development. The extensive regions covered with pine and other timbers, of a superior quality—the immense deposits of iron ore and bituminous coal—now undeveloped and consequently useless, will furnish sources of industry, traffic and wealth, that may well astound those of our citizens whose attention has not been given to the subject. A long residence within the region under consideration, and association with its business operations, enables me to speak from personal observation of its resources and its capability of supplying and sustaining a heavy trade. It is hoped a few remarks, therefore, will not be deemed impertinent. The contemplated improvement will pass through or within convenient trading distance of the following counties, to wit: Allegheny, Westmoreland, Butler, Armstrong, Indiana, Clarion, Jefferson, Venango, Elk, Warren, McKean, and Potter, and will afford an outlet for the travel and trade of the valleys of the Allegheny, Kiskiminitis, Buffalo, Crooked Creek, Cowanshanock, Pine Creek, Mahoning, Redbank, Sugar Creek, Clarion, Tionesta, French Creek, Brokenstraw, Conewango, Kenzua, Tunnawant, and other large navigable highways.

To estimate the value of this great work, it would seem sufficient, to give an expose of the local business it will reach and create. A brief reference to the business operations, and capacities for enlargement and augmentation, in the several counties lying within its influence is made from such data as are within my reach and control.

The aggregate population of the counties heretofore named (Westmoreland excepted) was, in 1840, 193,487, in 1850, 308,795: increase in ten years, one hundred and fifteen thousand, being equal to sixty-two per cent. This fact alone appeals strongly to the mind, in estimating the future value of the trade of these counties, and the necessity and usefulness of opening new avenues for its outlet to market. A detailed statement of the agricultural, manufacturing, and mechanical industry, and materials for commerce of this region of our country, I am unable, at present to furnish. I shall give such facts as I have been enabled to collect from reliable sources. In Pittsburgh and its vicinity there are in operation numerous institutions of industry, whose fabrics will find an additional outlet by the construction of the Valley railroad. I shall mention some of them. There are sixteen rolling mills; capital invested—six millions; yearly product valued at four millions; consumption—about sixty thousand tons of

pig metal per annum. There are several forges and 80 foundries of the largest class; capital invested, two and a half millions, annual products worth two millions, and annual consumption of pig metal thirty thousand tons. There are two extensive novelty or variety works, for the construction of the many articles composed of iron. There are eight large engine manufactories and many small foundries and smelting works.—These, with numerous other establishments for the fabrication of locks, latches, coffee mills, scales, sales, axes, edge tools, steel springs, axles, anvils, vices, mill, cross-cut and other saws, gun barrels, cannon and cannon balls, shovels, spades, iron railings, nails, tacks, brads, garden and farming utensils, including iron ploughs, show how varied and valuable are the operations in this locality connected with the iron trade. Add to these the establishments for making wire, machine cards, cast-steel and files deservedly reputed of superior quality, and we may form some idea of the extent of this branch of industry. In supply of raw material for this great consumption it is worthy of remark that the counties of Armstrong, Butler, Clarion, Venango and Westmoreland, all lying within the range of the contemplated improvement, had, in 1848, in successful operation upwards of sixty blast furnaces, with capacity to produce annually one hundred and twenty thousand tons of pig metal. In this vicinity are five or six large cotton factories, with an invested capital of one and a half millions, consuming annually fifteen thousand bales of cotton, and yielding a product worth from one to two millions per annum. Woollen factories are numerous not only in this, but also in the counties of Butler, Armstrong, and Clarion.

There are eight flint glass works, seven viol and eleven window glass manufactories; annual product valued at two millions. There are in operation many steam saw mills and planing machines, steam flouring mills of largest class, whose success warrants the assertion that Pittsburg is destined at no remote date to become the central market of the great wheat region of Ohio, western Pennsylvania and Virginia. There is a copper smelting furnace and rolling mill extensively engaged in the successful manufacture from the ore of copper sheets and plates; wagon and plough factories, soda factories, steamboat and ship building, (fifty of the former, I am told, are built annually) barrel and hoghead factories, together with numerous other branches of industry connected with saddlery and harness; tanneries, breweries, distilleries, white lead factories, cabinet ware, queens ware, and workings in tin, copper, brass and silver; hat and clothing manufactories, brush factories, gloves and hosiery factories, paper factories, rope walks, musical instrument factories; mill stones; book printing and binding establishments; all tending to exhibit the immense amount of the products of industry, to be beneficially assisted by each new avenue opened for outlet and sale. Situate at the head of navigation by steamboats, and commanding the whole extent of the valley of the Ohio and tributaries by business influence, it is impossible to conceive the prospective growth of these cities and county. Instead of the one thousand merchants, three thousand manufacturers, and five thousand artisans and mechanics, now residing within our limits, the completion of these works of internal communication will, in a few years, quadruple the number.

Butler county, containing most productive lands, and filled with extensive fields of minerals, requires only an outlet for its, natural resources, to place it among the most flourishing counties in the Commonwealth. Although the Valley road may not pass through any part of the county, it will bring much of the territory within convenient reach of a market. In the valleys of Buffalo, Sugar Creek, and Bear Creek, teeming with ores and agricultural riches, a new impulse will be given to industry and improvement, that cannot fail to bring a large amount of business upon our road, and increased wealth to that region and its market—Pittsburgh.

The Northern section of Westmoreland county will find in the Valley road, the cheapest and most reliable way to market. This portion, although less improved than other parts of the county, pos-

sesses the very best quality of soil, and is susceptible of more extensive and rapid improvement than the more cultivated and worn districts of the county. I am unable to estimate the value of its agricultural and mechanical industry. The Kiskiminitis valley, with its many salt wells, its minerals, its water powers, and the Pennsylvania canal to bring its riches to the point of intersection with this improvement, must be entitled to regard and attention in estimating the business that may be thrown upon our road, from that section of country.

Portions of Indiana country will seek a market by the Valley road. Uncertain and expensive as are the present means of transportation for their products, large and valuable improvements in farming and in the development of natural resources, have been made in this fine country within the few past years. Open to the citizens an outlet, and it will not be long before the fatness of that land and the wealth creating labor of her honest yeomanry, will be poured in an hundred fold increased trade into this market, and demand in return the various articles of our fabrication.

In Armstrong county there are large tracts of richest alluvial and limestone lands, surpassed in quality by none in the country. Coal, iron ore, and other minerals are found in abundance in every township. There are two largest class rolling mills, capital invested two millions. One of these mills is constantly and largely employed in the fabrication of railroad bars, with capacity to make from fifteen to twenty thousand tons per annum. There are many woollen factories and steam saw mills. Sixteen blast furnace stacks, producing an average yield of two thousand tons each per annum. Numerous flouring mills of the first class, both in extent of their operations and in the quality of the manufactured articles. One of these mills I am told, has capacity to grind from one to two thousand bushels of wheat per day. The salt wells are numerous and productive. The susceptibility of increase in the trade and business of this county, can be scarcely estimated. A very slight development has been as yet made of her resources. An open pathway to market being constructed, and the sequent rewards thereby afforded to enterprise, would make the agricultural and manufacturing industry of this county a powerful auxiliary to the prosperity of this city and vicinity.

Clarion and Venango counties have been long known to this community as rich in mineral resources. In both counties are to be found large bodies of the very best lands. Within the last few years so great have been their improvement and success in agricultural pursuits, that the heavy population brought into their borders by the erection of iron manufactories, has not furnished a market for all of their products. A short time, since there were in operation twenty eight blast furnaces in Clarion co. and eighteen in Venango, capable of producing from fifty to sixty thousand tons of pig metal per annum.

It is true, that the depression of the iron business has materially lessened the trade and active industry of these counties, and prevented that rapid advancement to prosperity which a few years ago surrounding events promised to their people. Still it is confidently believed that if new channels for articles of iron composition are opened, the increased demand and ready sale of the raw material consequent upon such results, will justify the expectation that a resuscitation of the prostrated industry of that section of the State, may be secured. The wealth of these counties cannot lie dormant. The road we propose to construct will bring to their agriculturalist a convenient market, and for the transmission of their natural wealth a cheap and reliable thoroughfare. The full use of the mineral and agricultural resources of these counties, must be favorably felt in the business operations of this country.

In Jefferson, Elk, and Warren Counties, for various agricultural purposes, the lands are of superior kind. The mineral deposits are extensive and exceedingly valuable, although at present from difficulty in reaching market, these remain useless in the hills and valleys. A coal vein of twelve feet thickness has been worked in Jefferson county, and it is said coal abounds in the entire region of Jefferson and Elk. It is well known that there

are large amounts of iron ore. Here we find in proximity, coal iron ore, timber and lime. Invite into action these sources of wealth by the construction of convenient highways, and the beneficial results to all parties, cannot be doubted. These counties, however, possess immense value, in their primeval forests. The timber of this region, particularly the pine, of the best quality, and in almost incalculable quantities, in transmission to a market, must be of high moment to this section of the State. Its importance may be estimated from the statement hereafter mentioned.

McKean and Potter counties, from position, will necessarily carry their trade along the eastern line of the Valley road. The immense pine forests of these counties, and their inexhaustible fields of bituminous coal, will find an outlet to New York, and by connecting with the system of improvements in that State, be furnished, a market of boundless extent. The coal of McKean, lying nearer to New York and the Lakes than any other large body of coal yet discovered, will constitute on the eastern part of our road a trade, the magnitude of which cannot be readily conceived. In the rapid settlement of these last named counties, it is readily perceived that a new and undisputed market is opened for our wares.

In the event of the construction of the Valley road, will industry and enterprise seize these natural advantages and turn them to profitable use? The history of our people in every portion of this wide-spread Republic, answers in the affirmative. Increase in travel and trade has uniform kept pace with, and generally in advance, of the facilities afforded them by the erection of public improvements. Pack horses, mud roads, turnpikes, canals and iron railways have each in turn proved the truth of this declaration. It is alleged that the river and its tributaries furnish an adequate outlet to market, and that it will compete with any improvement made along its borders. The uncertainty and dangers of that navigation will destroy it, as a competitor. The frosts of winter and the droughts of summer, with the artificial impediments to its use, even in high floods, are alone a sufficient answer to the objection.

These estimates being correct, a few figures will demonstrate the value of our railway as an investment. If to tonnage of iron, lumber and coal, be added other matters of local trade, the merchandize and ware to be transported in supplying the wants of the people engaged in producing and bringing this tonnage to market, and the amount of travel, we may form some slight estimate of the revenues likely to flow from the Allegheny Valley road.

In its foreign connections and proable business, our road presents still more astonishing evidences of its value. We have already alluded to the important position of its western terminus. In passing North-eastwardly, our road will cross the Sunbury and Erie railroad, by which it will form connections with Philadelphia and Lake Erie at the harbor of Erie. To those seeking a south-western or north-eastern point, this road affords a most eligible and desirable route. A few miles north of the State line, we will connect with the New York and Erie Railroad, and through in and its branches open to our manufactories the interior of New York, and by various channels, an eastern, western, and northern market. Improvements already made, or in progress, bring us in connection with the central railways of New York, and open to us an highway to the cities of Boston and New York, and the lower lakes. A glance at a map will demonstrate the truthfulness of these speculations, and convince the inquiring mind that the first link in the great chain is to be furnished by the construction of the Valley road.

That the improvement will pay a liberal interest on the cost of its construction, there cannot remain a doubt. Will it return a fair equivalent for the outlay they may make to the citizens of Allegheny county? Its influence on the value of real estate, each property holder can estimate for himself. To the merchant, our road promises, even should it never pay an interest on its cost, an ample return for the aid he may give it, in the great increase of business, it must produce, and in the choice of markets, it gives to him for his purchases. To the manufacturer and mechanic it opens a new region for the sale of his fabrications, and se-

cures to him new facilities and certainties in obtaining supplies. To that most numerous and interesting class, the working men, it gives assurances of steady employment and remunerating wages, in the increased business of their city.

The Jeffersonville Railroad.

We saw a gentleman a day or two since who has been out to Shelbyville, Knightstown and Rushville, in Indiana, with which places we will be connected in about three months by the Jeffersonville Railroad, and he gives us a gratifying account of the feeling among the people in those places, and their anxiety for the completion of the road, in order that they may transport their produce to this city. All along the road are immense quantities of corn, waiting to be brought to market. In one house alone, at Carthage, there are no less than one hundred car loads of corn, of 250 bushels each. It is selling there at 16 cents per bushel. There are also large quantities of excellent potatoes, which are selling at low prices.

As soon as the road is opened, at least 500 barrels of flour will be brought here per day, and the quantity will soon be increased to 1000 barrels per day. This market will also be the principal depot for the wheat and other products of that rich and fertile section of our sister State, and it will be impossible for any one to calculate the increased trade the opening of the Jeffersonville road will bring to Louisville.

Our readers may, perhaps, be interested in hearing something of the progress of work on the road. Last week two miles of iron were laid, and the cars are now crossing the Vernon fork of the Muscatatah, a distance of forty two miles from Jeffersonville, and ten miles this side of Rockford. Two or three days since the steamer *Jamestown*, with two barges in tow, having on board 1,400 tons of iron, arrived from New Orleans. This will be sufficient to lay the road to a point some four or five miles beyond Rockford, and within nine miles of Columbus. The *Hiram Powers*, with 300 tons of iron, and another boat with 500 tons, are now on their way from New Orleans, and will land their freight at Madison, from which place it will be taken to Columbus, where the work of laying it from that point in this direction will be commenced. It is confidently expected the cars will be running to Columbus by the 1st of August. From Columbus to Edinburg, eleven miles, a strong force is at work, and in a month or two after the completion of the road to the former place, the iron will be laid to Edinburg, and thus a direct connection be secured with that place, Shelbyville, Knightstown and Rushville, entirely independent of the Madison and Indianapolis road—a consummation most devoutly wished by all the people in those sections. The road will be well provided with locomotives, and passenger freight and stock cars, and we may all look and prepare for an active trade with the interior of Indiana this fall.—*Louisville Courier.*

Notice to Contractors.

SEALED proposals will be received at this office until sunset on Monday, the 30th inst., for the graduation and masonry required on 26 miles of the Pittsburgh and Steubenville Railroad, from Campbell's Run to the Virginia Line. Plans and profiles will be exhibited, and the necessary information respecting the work given by the Engineer at his office for five days prior to the letting.

By order of the Board.
D. MITCHELL, Jr.,
Chief Engineer P. and S. R. R. Co.
Engineer's Office, Pittsburgh, }
May 6th, 1852, }

Lithographic Printing,

169 Chestnut St., Philadelphia,
A. BRETT & CO.

Drawings of Landscapes, Buildings, Architecture, Ornaments, Portraits, etc., printed plain and in colors. Title pages, embossed labels, maps, cards, bill heads, as well as transfers from steel and copper, executed in superior style.

M. B. Hewson, Civil Engineer.

(Open to a New Engagement.)
Memphis, Tenn.

ARTIFICIAL LIGHT FOR RAILROADS.

LANTERNS FOR LOCOMOTIVE ENGINES
With argand burners and reflectors of a true parabola, were introduced by the subscribers in May, 1840, since which time we have supplied the following named Railroad Companies with them, viz:

Androscoggin & Kennebec,	Michigan Central,
Albany and Schenectady,	Mad River and Lake Erie,
Auburn and Syracuse,	Manchester and Law'ce,
Boston and Providence,	Mansfield and Sandusky,
Boston and Worcester,	Macon and Western,
Boston and Lowell,	Nashua and Lowell,
Boston and Maine,	Newburyport,
Buffalo and Rochester,	N. Hampshire Central,
Columbia and Philad.,	N. York and N. Haven,
Columbus and Xenia,	Norfolk County,
Cheshire,	Northern, N. Hampshire,
Connecticut River,	" New York,
Conn. and Passumpsic,	Norwich and Worcester,
Cocheo,	N. Orleans & Carrollton,
Cuba,	N. London, Willimantic
Eastern,	and Palmer,
Erie,	Old Colony,
Essex and Manchester,	Port., Saco and Ports'th,
Fitchburg,	Rutland and Burlington,
Fall River,	Richmond and Petersb'g,
Great Falls and Conway,	Saratoga & Washington,
Hartford and New Haven,	S-onington,
Hart., Prov. and Fishkill,	Syracuse and Utica,
Hudson River,	South Reading Branch,
Kennebec and Portland,	Vermont Central,
Lowell and Lawrence,	Vicksburg and Jackson.

In all cases our Lanterns have given satisfaction. The reflectors are made with great care, are heavily plated with pure silver, and every part of the work is strong and substantial.

The reflectors are similar to those used in the United States Lighthouses as now furnished by us. The United States Commissioners for running the North Easterly Boundary line, procured of us a small parabolic reflector with an argand burner of 3 inch diameter, and Major Graham, in his report to Congress, says the light was distinctly seen thirty miles, and was used in establishing the line.

Having heard complaints of the artificial lights used for lighting Railroad Passenger cars, we made experiments to obtain a superior light to any then in use. In November, 1847, we introduced a double parabolic reflector to an argand burner, which reflects the rays of light in a direct horizontal line parallel with the sides of the car and over the heads of the passengers, thus avoiding the inconvenience of a concentrated light. These lamps are esteemed the best in use, and are sold at moderate prices.

Samples of our Locomotive and Car Lamps may be seen at Messrs. Bridges & Brothers, 64 Courtlandt street, New York.

HENRY N. HOOPER & CO.,
No. 24 Commercial St. Boston.

May, 1852.

To Contractors.



OHIO AND MISSISSIPPI RAILROAD, EXTENDING FROM CINCINNATI TO ST. LOUIS.

SEALED proposals will be received at the offices of the undersigned in the cities of Cincinnati and St. Louis, until the 15th day of June next, for the grading, masonry and bridging, of the following portions of the above road.

First—From Cincinnati, extending 72 miles westerly, to the intersection of the Madison and Indianapolis railroad.

Second—From Illinoistown, opposite St. Louis, extending 50 miles easterly, to a point near the town of Carlyle.

Maps and profiles of the line will be ready for exhibition and all the necessary information will be given at the above offices on and after the 24th inst.

For the remaining 213 miles, proposals will be received from such parties as desire to bid for the work upon their own examinations and such information as the Engineers will be able to give, the character of the country being uniform and preliminary surveys in progress.

Co-partnership firms bidding for the above work will please give the full name and Post-Office address of each member of the firm.

H. C. SEYMOUR & CO,

To Railroad Companies.

THE Undersigned is prepared to negotiate with Railroad Companies for the use of the improvement patented by Henry M. Paine "for Ventilating Railroad Cars, and excluding dust, cinders, sparks, etc., from the same." Among the many advantages resulting from the use of this improvement may be named the following:—the entrance of dust, cinders, etc., is effectually prevented; it provides free and perfect ventilation without unpleasant draughts; its use preserves the interior fittings of the cars; secures the safety of passengers from injury, etc., etc.

The free use of this improvement upon one car is tendered to each railroad company disposed to try its merits; provided application be made to the R. C. V. Co., who will guarantee the free use of the same, under seal of the company, for the full time agreed upon in testing its value.

The R. C. V. Co. will sell rights under this patent to none but Railroad Companies, who can contract with any party they may choose to employ in placing the improvement upon their cars. Perfect models of the improvement, full size, to be seen at the Office of the Company. Pamphlets setting forth full particulars will be sent to any party sending for them.

H. J. HALE.

Gen'l Agent R. R. Car Ventilating Co.,
146 Broadway, (up stairs.)

Rubber Springs.

TO RAILROAD COMPANIES, CAR BUILDERS AND OTHERS.—In an advertisement in the last Railroad Journal, Mr. Day endeavors to enlist the sympathies of the consumers of India-rubber Springs in his favor, by endeavoring to persuade them that he is their champion against monopoly, forgetting, I presume, that he has on more than one occasion offered to compromise with me, and using, as an argument, that in such case I could obtain the entire monopoly of the business, and sell the Springs at any price, which I declined to do—relying upon my rights and the superiority of my Springs.

Mr. Day has for months past been trumpeting to the world the fabricated statement that the American Institute in October last, awarded to him the first premium for the best India rubber Car Spring. The premium for the best India-rubber Spring with the diploma was awarded to myself. Mr. Day now turns upon the American Institute and insinuates that that body has been guilty of foul play. I call the attention of the public both to Mr. Day's attempted deception, and to the mode in which he now tries to get out of the scrape when convicted of it, by impeaching the character of the American Institute, the very umpire selected by himself.

Nether Day nor Fuller have a shadow of a right to the patent for an India-rubber Spring, nor to the composition of which it is made; and all Railroad companies and responsible parties, infringing my rights, (which are now vested in the New England Car Spring Company,) will be prosecuted.

F. M. RAY, 104 Broadway,
New York.

To Contractors.

PROPOSALS will be received at the office of the Steubenville and Indiana Railroad Company, in Newark, from the 1st to the evening of the 8th day of June, 1852, for the Grubbing, Clearing, Grading and Masonry of that portion of the Steubenville and Indiana Railroad between Coshocton and Newark, being about 35 miles in length, and comprising some heavy cuts and fills, and a Bridge across the Muskingum River.

Bids will be received in sections of about one mile each, or for the entire division.

Profiles and specifications, with approximate estimates of quantities, can be seen at the Offices in Steubenville and Newark after the first of June.

J. BLICKENSDECKER, Jr.,
Chief Engineer.

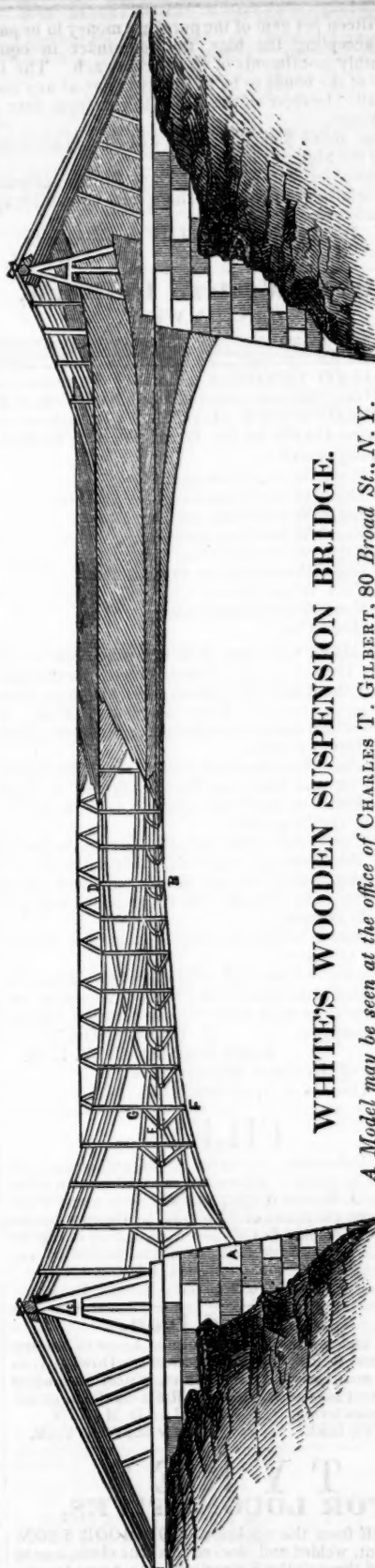
Steubenville, April 26, 1852.

GLENDON LOCOMOTIVE TIRES,

FOR SALE BY
GEORGE GARDNER & CO.,
No. 5 Liberty Square, Boston.

Measuring Tapes

OF the best quality for Surveyors and Engineers, manufactured by
EDDY & WELLS,
6m*15 No. 7 Platt st., New York.

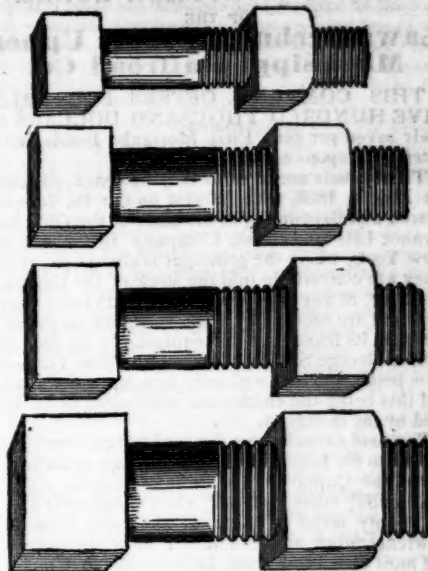


WHITE'S WOODEN SUSPENSION BRIDGE.

A Model may be seen at the office of CHARLES T. GILBERT, 80 Broad St., N. Y.

Length of span, anything short of 1,500 feet, with perfect safety for every kind of travel. The above cut represents one with roof, which however is not essential. For a full description, see pamphlets; for further information, respecting models, rights, &c., apply, by letter or otherwise, to AMMI WHITE, or JOSHUA P. THAYER, proprietors,
Cambridgeport, Mass.,
Office next door to the Athenaeum.

BOSTON BOLT COMPANY,



BOSTON, MASSACHUSETTS.

MANUFACTURE

Screw Bolts of all kinds,

Suitable for Steam Engines & all kinds of Machinery. Also, Car Bolts, Bridge Bolts, and Bolts for Buildings, etc., etc.

All kinds of neat forgings of Bolts to gauges and patterns for Locomotive Engines, etc., etc.

N.B.—This Company manufacture, also, the most complete Slide Lathe, and at the last Franklin Institute Fair, were awarded a Premium for the superiority both of construction and design of the same.

N. A. BARRETT, Agent,
75 State Street, Boston.

To Telegraph Companies. TELEGRAPH WIRE.

ORDERS taken for all numbers of best quality of English Telegraph Wire. Samples at the office of the Subscribers. JEE, CARMER & CO.,
6m*14 75 Broad st., New York.

RAILROAD CAR AND COACH TRIMMINGS.

Doremus & Nixon,

21 PARK PLACE

AND
18 MURRAY STREET,
IMPORTERS AND FURNISHERS

HAVE FOR SALE

Plain Garnet Plush. Fig. Garnet Plush (Butterfly pat.
"Crimson "Crimson " (Elegant.
"Scarlet " " " (Gen. Taylor.

BROCATELLES.

Crimson Silk Brocatelles. Gold and Maroon do.
Gold and Blue " " Brown "
Silk and Wool " of every color.

MOQUETTES,

Of elegant designs and colors.

GERMAN CLOTH FOR CAR LININGS.

The most beautiful goods ever shown in this country, and the subscribers are the sole agents for the sale of them.

Oil cloths Enamelled with Gold. These goods can be
" " Silver. furnished in any
Do. Silver ground velvet printed. dimensions req'd.

CURLED HAIR

Of every description and quality.

New York, 1850.

ly16

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery for making Spikes, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

SALE OF MORTGAGE BONDS.

OF THE
**Lawrenceburgh and Upper
Mississippi Railroad Co.**

THIS COMPANY OFFERS FOR SALE FIVE HUNDRED THOUSAND DOLLARS of their seven per cent. First Mortgage Bonds, with Interest Coupons annexed.

These bonds are in sums of \$1000 each, payable 1st March, 1866, with interest on the 1st days of March and September, at the office of the Ohio Insurance Life and Trust Company in the city of New York, where the principal is always payable. They are convertible into the stock of the Company at par, at any time within five years from their date, and are secured by a first mortgage on the entire road, its franchises and equipments, by deed of trust to George S. Coe, of the city of New York.—This being the first and only lien upon the road, and this being the entire sum authorized to be issued by the mortgage.

The road extends from the road to run from Cincinnati to St. Louis, at Lawrenceburgh to Indianapolis, the Capital of the State of Indiana, a distance of 90½ miles, and will, when completed, with the twenty miles of the road aforesaid, between Lawrenceburgh and Cincinnati, form the nearest and most direct line from Indianapolis to Cincinnati.

It passes through several important towns and over a most fertile and well improved country, and by means of railroad connections made and making at Shelbyville and Indianapolis, this line will be placed in communication with fully one half of Indiana, forming the best, and for much of the country, the only avenue of travel and trade to Cincinnati.

Seven railroads are made or making to Indianapolis, the most of which will be important feeders to this Cincinnati road—three railroads are made to Shelbyville, the business of which must naturally seek an outlet over this road.

The entire line is under contract, about 20 miles is now ready for the iron—the grade will be prepared to receive the superstructure as far as Shelbyville, 63 miles, this fall, which place is already connected by railroad with Indianapolis, and the contracts for the road complete to Indianapolis expire on the 1st October, 1853.

The rails for the entire line, 9,200 tons, are purchased, 1200 tons are on the line, and are now being laid down; 1000 tons will be forwarded from this port immediately; 4,200 tons are ready for shipment in Wales, and the residue is to be delivered in New Orleans next winter.

The total cost, with rolling stock and equipments, ready for business, is \$1,250,000; \$800,000 of stock has been subscribed and the largest portion of it paid in and expended. This mortgage provides for only \$500,000, and is the only one intended to be given, as with it the means of the Company are ample for the entire work, and the lien thus created only amounts to \$5,500 per mile.

Indiana is now the fifth State in the Union, and is fast advancing in wealth and population. Indianapolis, her seat of government, is likely to be the largest inland city in the west. There is being concentrated at it a net work of railroads, which, with connections, will penetrate every part of the State. It must be evident that the road which shall form the nearest and best connection with this system of public works, and Cincinnati, the great Emporium of the West, must become an important trunk line, and amply repay the expenditure upon its construction.

In addition to the mortgage the directors and principal stockholders of this road have deposited with the Trustee their personal guarantee to the holders of these bonds for the punctual payment of the interest thereon until the road is completed. Proper certificates and references are given, showing the entire ability of those parties to fulfil their engagements.

Sealed Proposals for any amount of these bonds, not less than \$1,000, will be received until Saturday, the 22d of May next, at 3 o'clock P. M. Proposals to be directed to Messrs. DE LAUNAY, ISELIN & CLARKE, No. 63 Wall street, and endorsed "Proposals for Lawrenceburgh and Upper Mississippi Railroad Bonds."

Fifteen per cent of the purchase money to be paid on accepting the bids, the remainder in equal monthly instalments of 15 per cent each. The takers of the bonds to be at liberty to pay at any time in full. Interest on the bonds to run from date of payments.

The above \$500,000 bonds will be sold absolutely to the highest bidder.

Pamphlets and Maps, and any further information relating to these securities, can be had by application to

DE LAUNAY, ISELIN & CLARKE,
63 Wall st.

**Great Western Railroad,
CANADA WEST.**

SEALED TENDERS, endorsed "TENDERS FOR CARS," will be received until Nine o'clock A. M., WEDNESDAY, May 26th, for furnishing the following CARS for the Great Western Railroad Company, to wit:—

- 25 Eight Wheel Passenger Cars,
- 4 Eight Wheel Express and Mail Cars,
- 8 Eight Wheel Baggage Cars,
- 20 Eight Wheel Emigrant Cars,
- 100 Eight Wheel Platform Cars,
- 150 Eight Wheel House Freight Cars,
- 100 Four Wheel Gravel Cars,
- 25 Four Wheel Repair Cars,
- 15 Hand Cars.

The above Cars are to be manufactured in the City of Hamilton, in buildings erected for the purpose, by the Railroad Company, and are to be completed on or before the First day of July, 1853. A portion of the same are to be completed by the First day of October, 1852.

Plans and Specifications will be ready for examination on and after the Eighteenth day of May next. Plans of the buildings can be seen at the Office of the Engineer.

The Contractor will be required to rent the buildings of the Company, and to furnish all of the requisite machinery, except the Engine and main line of shunting, which will be provided and put up by the company.

Information will be furnished by mail to parties wishing to tender.

The gauge of the road will be five feet six inches.

The Directors reserve the right to accept or reject tenders, as they may consider for the interest of the company.

R. G. BENEDICT,
Chief Engineer, G. W. R. R.
Office of the Great Western R. R.,
Hamilton, April 20th, 1852.

FILES.

THE Subscriber, Agent for the Manufacturers, offers to execute orders for the well known Files made by J. Martin & Co., and which for many years have borne the stamp of "Vickers." These Files are made from Naylor & Co's best steel, and for hardness, beauty of cut, and durability are not surpassed by any other make.

WM. BAILEY LANG,
No. 9 Liberty Square, Boston.

Railroad Iron.

THE undersigned being appointed Agent to Messrs. Guest & Co., the proprietors of the Dowlais Iron Works, near Cardiff, South Wales, is duly authorised to contract for the sale of G. L. Rails on the most advantageous terms.

RICHARD MAKIN,
4 New st., New York.

**T Y R E S
FOR LOCOMOTIVES,**

MADE from the celebrated LOWMOOR IRON, bent, welded and blocked to a true circle, can be imported through the Subscriber, sole Agent for the United States and Canada.

These tyres are now running on our principal roads in this country, and are sent from the Company's Works with ONE WELD, at a cost equal to that heretofore charged for those made from two short bars.—The superior quality of these tyres gives them a preference, and they now stand without a rival.

Orders executed for any quantities, with promptness and despatch. WM. BAILEY LANG,
No. 9 Liberty Square, Boston.

Rubber Springs.

THE New England Car Spring Co. have just received the following letter from Mr. Bird, of the highly respectable firm of Bird & Weld, of Trenton, N. J., which they are induced to publish, as it somewhat exposes the very transparent affidavit of Mr. Israel Tucker, lately published by Mr. Day:

Trenton, March 10, 1852.

F. M. RAY, Esq.:

Dear Sir—My attention has lately been called to the affidavit of Israel Tucker, lately published in the Trenton papers, in which he swears that you made H. H. Day, through him, sundry large offers to compromise the law suits now pending between Mr. Day and Charles Goodyear. I must say that I think there is some mistake on the part of Mr. Tucker, for the reason that Mr. Day has several times requested me to use my influence with the rubber manufacturers to buy him out of the business, and I have as frequently tried to induce those parties to buy him out, but have always failed—not one of them being willing to pay Mr. Day one cent to relinquish the business. The last time Mr. Day applied to me for this purpose was just before the patent suit between him and Mr. Goodyear was expected to be tried in Boston. We met on board the steam boat between Newark and New York, on the day the bridge over the Hackensack river was burned. In that conversation he was very particular to ask me to see the parties and say to them that he would be very glad to sell out his whole interest in the rubber business, including all his machinery, and all his patents, and his business stand in New York; would give bonds to leave the business and not go into it again, and would allow a judgment to be taken out against him, so that an injunction could at any time be taken to stop him or any other person who should attempt to infringe upon the patents, and would also agree that all his counsel should become the counsel for the other parties. I immediately called upon yourself, Mr. Charles Ely, Mr. William Judson, Mr. John Greacen, Junior, Mr. R. Ford, and Mr. Candee, and tried very hard to bring about a settlement. I first called upon you, and afterwards upon the others, and got but one answer from all the parties, that "they would not pay Mr. Day one cent to leave the business to-morrow; if the patents were good they meant to sustain them, if not, the sooner they went down the better." Your answer was instantly given, "that you would not have anything whatever to do with any compromise with Mr. Day upon any terms whatever." It is for these reasons that I think Mr. Tucker was mistaken in his affidavit that you made him large offers to settle this matter, in order that you and your associates might have a monopoly in the business.

In haste, yours truly,
J. W. BIRD.

Railroad Commission Agency.

THE Subscriber offers his services to Railroad Co's and Car Makers for the purchase of equipment and furniture of roads and depots and all articles and materials required in the construction of cars, with cash or approved credit. No effort will be spared to select the best articles at the lowest market price.

He is sole Agent for the manufacture of the ENAMELED CAR LININGS, now in universal use. The best Artists are employed in designing new styles, and he will make to order pieces with appropriate designs for every part of the car, in all colors, or with silver grounds and bronzed or velvet figures.

He is also Agent for Page's Car Window Sash Fasteners, which is preferred by all who have used it to any other.

CHARLES STODDER,
75 Kilby st., Boston.

June 20, 1851.

3m.

To Contractors.

PROPOSALS for the construction of the Syracuse and Binghamton Railroad complete, in conformity to a plan and specification which may be seen at the Office of the Engineer, in Syracuse, on and after May 5th, will be received at the Office of the Secretary, in Syracuse, until the 15th day of May next. Payment for the work to be made in cash, and the stock and bonds of the Company.—Proposals to specify the proportion of each, and may be made for the whole or a portion of the work.

A. H. HOVEY, Secretary.

Syracuse, April 15, 1852.

Boiler Plates and Axles,

MADE of the celebrated Low Moor Iron, are offered for sale at the manufacturer's prices by

WM. BAILEY LANG,
Jan. 22, 1852. No. 9 Liberty Square, Boston.

Day's Superior Car Springs.

RAILROADS and car builders are respectfully invited to read the following letter from Messrs. Wharton and Petsch, of Charleston, S. C., the most extensive car builders in the south, as to the superiority of my Springs over those of Ray's. As this opinion of those gentlemen is based upon a test made of these Springs on the same road side by side, further comment is unnecessary.

All orders promptly filled with an article superior to Ray's at fifty cents a pound.

HORACE H. DAY,
23 Courtlandt Street, N. Y.

March 23, 1852.

Charleston, S. C., March 14, 1852.

HORACE H. DAY, New York:

Dear Sir—An advertisement having appeared in our papers for the purpose of assisting the New England Car Spring Co. to maintain a monopoly and injure you in the sale of your springs in our section of country, we deem it but an act of justice to ourselves, (who have been using your springs for some time past in our business), to you and to all interested, to state facts which have come under our notice as to the durability of your springs, in connection with those of the New England car spring Co. Many of the above company's springs have been in use on one of the largest railroads in our State, and have proved to be inferior to yours; in many instances they have burst open with the weight of loaded cars, and once with the weight of a car unloaded, when on the other hand we have never known yours to fail with any weight they have been pressed with.

The above railroad has a number of your springs in use, and it was through their foreman of repairs in car shop we were induced to try them; he uses no other when yours are to be had. We have never heard of any freezing in our late cold weather, nor are they affected by the heat of our southern summers. A consideration of no small magnitude is that your springs are 30 per cent cheaper in price, though the price would not govern us in our preference were not your springs superior.

Desiring that railroad companies and car manufacturers should not be imposed on by a monopoly to extort from them 75 cents per lb. for an article not as good as you are selling for 50 cents.

Oblige us by filling our last order at your earliest convenience, and wishing you every success, we are, very respectfully, yours,

WHARTON & PETSCH,
Car Manufacturers, Charleston, S. C.

Zinc Paint.

THE NEW JERSEY ZINC COMPANY having enlarged their works are prepared to offer their valuable Zinc Paints at greatly reduced prices.

Their White Paints which are now sold at for No. 1, 9 cents, for No. 2, 8 cents, and for No. 3, 7 cents, are much cheaper than any preparations of white lead, as they cover from 40 to 50 per cent more surface. These paints do not change color when exposed to bilge water, coal gas or sulphurous vapors; and as they dry much harder, are more easily kept clean than other paints.

The Brown and Black Zinc Paints are peculiarly adapted to all kinds of iron works. Being oxide of zinc, they galvanize the iron and preserve it more effectually than any other covering. These are sold at 5½ cents, at which price they are the cheapest paints for outside work, such as depots, station houses, machine shops, bridges, etc.

These paints dry rapidly, forming very hard surfaces, which resist the action of the weather much longer and are more nearly Fire Proof than any other paints.

MANNING & SQUIER, Agents,
Warehouse No. 45 Dey street,
New York.

Feb. 14.

Railroad Iron.

THE Subscribers, Agents for the Manufacturers, are prepared to contract for the delivery of Railroad iron at any port in the United States or Canada, or at a shipping port in Wales.

WAINWRIGHT & TAPPAN,
29 Central Wharf.

Boston, June 1, 1851.

Bowling Tire Bars.

40 Best Flange Bars 5½x2 inches, 11 feet long.
40 " " 5½x2 " 7 feet 8 in. long.
40 " Flat " 6x2 " 11 feet long.
40 " " 6x2 " 7 feet 8 in. long.

Now in store and for sale by
RAYMOND & FULLERTON,
45 Cliff street.

To Railroad Contractors.

OFFICE ILLINOIS CENTRAL R. R.

New York, March 15, 1852.

SEALED PROPOSALS will be received at the Office of the Chief Engineer, in the city of Chicago, Illinois, for the Grading, Masonry, Bridging and Superstructure, or either of them, with or without materials, on the following Divisions of the Illinois Central Railroad, to wit:

First Division, from Cairo to Big Muddy River.....	60 miles.
Second " " Big Muddy River to Township No. 1, north of the base line of the 3d principal meridian....	53 "
Sixth " " Bloomington to the Illinois River....	60 "
Eighth " " from Freeport to Du-buque.....	67 "
Ninth " " Chicago to Kankakee river.....	55 "
Tenth " " Kankakee river to Urbana.....	70 "

The proposals must be for the entire length of each Division and will be received at the Office in Chicago, as follows:

For the ninth and tenth Divisions, until April 15th, 1852, at noon.

For the sixth Division, until April 22d, 1852, at noon.

For the eighth Division, until April 29th, 1852, at noon.

For the first and second divisions, until May 27th, 1852, at noon.

Profiles, Plans and approximate Estimates of quantities will be ready for inspection, and blank forms for proposals and statements of the mode and terms of payment will be furnished at the office, over the New York and New Haven railroad passenger station, No. 33 Canal Street, New York City, and at the office of the Chief Engineer in Chicago, Illinois, on and after March 25th, 1852. The same, so far as relates to the first and second Divisions, may also be found at Jonesboro', Union Co., Illinois—to the sixth division at LaSalle, LaSalle County, Illinois—and to the eighth Division, at Freeport, Stephenson County, Illinois.

Separate proposals will also be received at Chicago, until the 27th of May, for furnishing Ties, Plank, Bridge Timber and Piles, for the whole or any part of the road.

Specifications may be obtained on and after the 1st of April, 1852, by application at the office of the Chief Engineer, in Chicago.

Satisfactory references will in all cases be required.

R. B. MASON,
Engineer in Chief Illinois Central R. R.

1852. 1852.

PEOPLE'S OSWEGO LINE, New York and Oswego,

ARE prepared for the Transportation of Merchandise and Produce to and from New York, and ports on the Western Lakes, by the Lake Ontario and Welland Canal route. Special attention given to Railroad Iron.

PROPRIETORS.

LEWIS & BEARDSLEY, Oswego.
JAMES W. CAMPBELL, New York.

AGENTS.

James W. Campbell, 111 Broad st., New York.
W. H. Clark, 60 Quay st., Albany.
Lewis & Beardsley, Oswego.
Smith & Hunt, Toledo, Ohio.
C. W. Bissell, Detroit, Mich.
C. Walker & Son, Chicago, Ill.
H. H. Hurlbut, Western States.
May 15, 1851

Railroad Iron.

1000 TONS of an approved T pattern, 59 lbs. per lineal yard, ready for delivery. Also, 1500 tons to arrive in March and April next. Apply to

DAVIS, BROOKS & CO.,
28 Beaver street.
January 31, 1852. 1m

India-Rubber Car Springs.

THE following letter has been received by the New England Car Spring Company, from one of the largest and most respectable Car Builders in Philadelphia, to which the attention of Railroad Companies, Car Builders, and others, interested in the use of India-rubber Car Springs, is directed:—

PHILADELPHIA, Jan. 28, 1852.

F. M. Ray, Esq., President of the New England Car Spring Company. Dear Sir:—Having seen an advertisement in the Railroad Journal, of a Premium India-rubber Car Spring, made by H. H. Day of your city, we ordered some of them for the purpose of giving them a trial; but during the last severe cold weather we found some of them that were exposed to the cold, frozen completely stiff, and solid, their elasticity being entirely destroyed. And fearing to use springs affected by any extremes of cold or heat of the atmosphere, we shall have to return them, and depend upon you for springs as heretofore, believing yours to be the only reliable India-rubber Springs, under all circumstances, and in all states of the atmosphere, that have yet come under our notice.—Having used many hundreds of your springs during the three years last past, we have never known one of them to fail. And as we are determined to use none but the best material of every description in our business, you will oblige us by filling our orders for springs as soon as possible. Very respectfully,

Signed, KIMBALL & GORTON.

Our object in publishing the above is to prevent any of our other customers being misled by parties advertising to supply cheap India-rubber Springs.

NEW ENGLAND CAR SPRING CO.,
104 Broadway.

To Inventors.

\$3,000 REWARD.—To MECHANICAL INVENTORS AND OTHERS.—In view of the many accidents occurring on Railroads, and with a desire to promote the safety and comfort of railway passengers, the undersigned proposes to offer for competition the following premiums:

\$1,500 for the best invention for preventing loss of life from collisions, and from the breaking of axles and wheels.

\$800 for the best method of excluding dust from cars when in motion.

\$400 for the best railroad brake.

\$300 for the best sleeping or night seat for railroad cars.

The premiums will be open for competition, from this date until the next annual Fair of the American Institute, where they are expected to be on exhibition: and no invention already introduced to the public will be entitled to compete for the prizes. It must be understood that these inventions are to be such as can be adopted and put into general use, the inventors in all cases retaining their right to patents.

The above will be left to the decision of competent judges, appointed by a Committee of the American Institute, to whom all applications on the subject must be addressed.

F. M. RAY.

New York, January 1, 1852.

Freight Cars.

50 Eight Wheeled platform cars made in the most thorough manner of the best materials and style of construction—India-rubber springs. For sale, to be delivered immediately.

ESSEX CO.,
Lawrence, Mass.

March 23 tf. GORDON McKAY, Agent.

CHILLED RAILROAD WHEELS.—THE UNDERSIGNED are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

To Car Builders and Railroad Companies.

The occupation of my time for some weeks past, in taking testimony to defend my rights, and the rights of the public against the "Combination," who are seeking to establish a monopoly, that they may extort their own prices for springs and other rubber goods, has prevented my noticing before two advertisements of F. M. Ray and associates, stating that some of my springs froze, but which they have never returned, or proved to have been frozen, and the other denying that I obtained the premium of the American Institute, in October last, for the best car spring.

As an offset to that clumsy and transparent device, I submit the following, from Messrs. Lippincott & Miner, extensive Car Builders, of Mauch Chunk, Pa., one of my customers, who procured from me at the same time, and out of the same lot that Kimball & Gorton's were sent, SIX HUNDRED SPRINGS and used them in the coldest sections of that State. This I consider a sufficient answer to that manufactured certificate to break down individual energy and enterprise, and build up a vast monopoly.

"Mauch Chunk, Carbon Co., Pa.,
Feb. 20, 1852.

Mr. H. H. DAY:

Dear Sir—We have been using your make of Rubber Springs under the coal cars that we have been making this winter, and are satisfied that they are the BEST ARTICLES of the kind we have ever seen, and take pleasure in recommending them to those building railroad cars.

Yours respectfully,

LIPPINCOTT & MINER."

The fact that I am selling for fifty cents as good, if not better, springs, than the combination are charging seventy-five cents for, and that I now own the only original and genuine patent, will sufficiently explain to the Railroad public why they are resorting to such despicable means to prevent my Springs being tested, and their reputation established upon the different roads. I guarantee my Springs to stand all varieties of climate in the United States, and to wear as long as any other Rubber Spring in use on any of the roads in the Union.

I repeat to the public, that in October last, the American Institute awarded me the Premium for the best Car Spring after a fair test between mine and Ray's. By reference to the awards published by the Institute itself at that time, upon its own records, and in the papers in this city, this fact is established beyond dispute. By what process of legerdemain the New England Car Company may have procured the certificate they have published, I neither know or care. The difference is this, my award was made to me at the time, and in the same public manner, all other awards of the American Institute were made and published under their own direction. The award of the New England Car Company, if any such exist, must have been procured within a few days past, in a manner and by means, that to say the least of it, surrounds it with suspicion and distrust.

HORACE H. DAY,
No. 23 Courtlandt street, N. Y.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing
J. W. FLACK, Troy, N. Y.
or, MOORE HARDAWAY, Richmond, Va.
March 6, 1850.

To Car Builders and Railroad Companies.

THE subscriber is now part owner of "Fuller's Patent India Rubber Car Springs," and cautions all persons interested of his determination to maintain his rights under this patent. Fuller's patent is the original, first, and only genuine patent. Extensive arrangements are made to supply the springs to car builders, railroad companies, and all who require the use of this patent.

The price is fixed at 50 cents per pound, including the privilege to use the patent.

The American Institute have just awarded the advertiser the first premium for best India rubber car springs.

Orders from any part of the United States, giving the exact size of the pieces of rubber required, will be promptly executed.

No other person has authority to make or vend the India rubber car springs, which operate by compression of the rubber.

HORACE H. DAY,
Oldest manufacturer of India rubber now in the business in the United States, and owner of nineteen India rubber patents. Warehouse 23 Courtlandt street, New York.

CAUTION.

India-rubber Car Springs.

AN advertisement having lately appeared in the public papers, signed H. H. Day, claiming to have received from the American Institute, the premium for the best India-rubber Car Spring, the subscribers think it well for the satisfaction of their friends and those interested, as well as for the purpose of exposing false statements, to publish the following Diploma, lately awarded to F. M. RAY, the inventor of the Spring. The original of which can be seen at the office of the company, No. 104 Broadway, New York.

DIPLOMA—Awarded by the American Institute to F. M. RAY, for the best India rubber Car Spring. A Gold Medal having been before awarded.
Signed, JAMES TALLMADGE, President.

N. MEIGS, Recording Sec'y.
ADONISAM CHANDLER, Cor'g. Sec'y.
New York, Oct., 1851.
New England Car Spring Co., No. 104 Broadway, New York.

S. CULBERTSON & CO., 12 BROADWAY, NEW YORK.

D. N. Pickering,

BOSTON, MASS.,

PROPRIETORS AND MANUFACTURERS OF

DEVLAN'S PATENT LUBRICATING OIL,

Equally applicable to light and heavy Bearings, Fast Speeds, etc.

This Oil, as a Lubricator, possesses the following advantages over all other Oils:

First, It runs machinery with less friction, thereby enabling Manufacturers, Steam Ships, Steamboat and Railroad Proprietors to accomplish more with the same motive power, and to save their machinery from unnecessary wear.

Second, It produces no Gum upon machinery, whereas all other Oils exhibit more or less. On machinery which is clean when it is introduced, it is warranted to run any length of time without showing any indications of gum.

Third, It will clean off any old gum that may have accumulated upon Slides and Journals from the use of bad Oils.

Fourth, As two gallons of this Oil will last as long as three of Sperm, and as it is thirty or forty cents a gallon cheaper, the consumer saves, by using it, at least fifty per cent. in cost.

PRICE \$1.00 PER GALLON.

It is now in use on the Baltimore & Ohio, Baltimore & Philadelphia, Susquehanna, Pennsylvania Central, Reading, New London, Willimantic & Palmer Railroads. Also, on numerous Steamers, and in various Manufactories.

Reading, Pa., July 12, 1850.

Mr. P. S. DEVLAN, Patentee

of the Improved Lubricating Compound:

Dear Sir,—In answer to your favor of the 11th inst., asking our opinion of your Oil, I would reply: We have had your Patent Oil in use upon the Reading Railroad for some five months past, during which time we have used it on our locomotive cars and stationary machinery of every description to the amount of twelve thousand gallons. It has answered the purpose to our entire satisfaction, proving equal to the best Sperm Oil, in both lubricating and lasting qualities, and securing to us an economy in its use of Forty per cent. compared with the best Sperm Oil. It does not "gum" nor "choke," runs and feeds freely, and is as pure and clean, and free from sediment or deposit as the best Sperm Oil. We are at present using it everywhere on the road.

Yours, very respectfully, G. A. NICOLLS,
Engineer, etc., Reading Railroad.

Allaire Works, New York, June 23, 1851.

We are using Devlan's Patent Lubricating Oil upon all our machinery, both light and heavy, and find it better than any other. It is a most perfect lubricator, keeping the machinery clear and the journals cool. We have no doubt that it must come into general use in Manufactories and upon Steamships and Railroads, as it is worth more, gallon for gallon, than the best Sperm Oil, and is some 40 per cent. cheaper.

E. WINSHIP, Foreman All're Works,
J. BREASTED, Manager All're Works.

Steamship Southerner, New York, May 1, 1851.

Sirs,—I am using your Oil, exclusively, on the steamship Southerner, and consider it superior in every respect to any Oil I have ever used. I have had no heating of journals since I have been using it. I consume not more than two-thirds the quantity that I do of other Oils, and my machinery runs cleaner and with less friction than it ever run before. I intend using no other Oil in future, and cheerfully recommend it to others as the cheapest and best Machinery Oil they can buy.

HENRY FARMER,
Chief Engineer Steamship Southerner.

Philadelphia, April 4, 1849.

Mr. P. S. DEVLAN:

Sir,—The Patent Oil you sent me to try, and which you design as a substitute for Sperm, has, I am happy to say, more than realized my expectations. I first had it fully tested on a locomotive engine for two days, by a skillful engineer, who assures me that it works equal to the best sperm Oil, with a saving in quantity of at least Fifty per cent. This saving, together with the greatly reduced price, at which you inform me you can furnish the article, recommends its use on Railroads, Mills and Factories, where large quantities of Oil are used. I have no doubt of its entire success, and under that impression tender you my sincere congratulations.

Truly yours, WILLIAM ENGLISH,
Supt'l Columbia Railroad.

Philadelphia, Nov. 12, 1850.

I certify that Devlan's Patent Lubricating Compound, has been thoroughly tested upon the Philadelphia & Reading Railroad, and all its locomotive engines, cars, and stationary machinery, and that the reports of the same have been most favorable and satisfactory, showing it to be fully equal to the best Sperm Oil in its lubricating and lasting qualities.

JOHN TUCKER,
President Phila. & Reading Railroad Co.

India-rubber Car Springs.

THE New England Car Spring Co. are in the receipt of testimonials of the quality of their Springs from sources which can be relied on. The following is from Mr. G. W. Whistler, Jr., Supt. New York and New Haven railroad:

New York and New Haven Railroad, }
Supt's. Office, New Haven, March 12, 1852. }
To Mr. F. M. RAY, 104 Broadway, N. Y.:

In answer to your letter of yesterday, I would say, that we have used your India Rubber Springs, under our care, with great success. We have had an opportunity of trying other India Rubber Springs in large quantities, but have never found them to equal your Springs.

Very respectfully, your obedient servant,
[Signed] GEO. W. WHISTLER, Jr., Supt.

The following is from Wm. Ettinger & Co., of Richmond, Va.:

Richmond, March 13, 1852.

F. M. RAY, Esq.:

Dear Sir:—In reply to yours of the 11th inst. we take pleasure in stating that we have during the past 18 months applied your Springs both for bearing and buffer Springs, to some 65 freight and passenger cars, and have found them to give the utmost satisfaction to the companies on whose roads they have been placed, and we shall continue to use them in preference to any others which we have seen.

Yours respectfully,
WM. ETTINGER & CO.

HUDSON RIVER R.R. OFFICE, 68 WAREEN ST.
New York, March 5, 1852.

F. M. RAY, Esq.

DEAR SIR: Since my connection with this road, I have watched with much interest the matter of Rubber Springs for railroad cars. I have no hesitation in saying that your Spring is incomparably the best article which I have seen or used. I have tried others and found them to fail under pressure, or to freeze in cold weather and become worse than useless. I should prefer using yours at double their cost, to employing any other rubber spring which has fallen under my notice. Your Springs possess the rare quality of preserving their elasticity at all temperatures.

Yours, &c. OLIVER H. LEE,
Late Supt. Hudson River Railroad.